

01/12/98

A

+

Please type a plus sign (+) inside this box → ☒

PTO/SB/05 (12/97)
Approved for use through 09/30/00. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

Attorney Docket No.	C0464.093809	Total Pages	2
First Named Inventor or Application Identifier			
Paul SIDIKMAN			
Express Mail Label No.			

(Only for new nonprovisional applications under 37 CFR 1.53(b))

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

- ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)
- ☒ Specification [Total Pages 66]
(preferred arrangement set forth below)
 - Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
- ☒ Drawing(s) (35 USC 113) [Total Sheets 32]
- Oath or Declaration [Total Pages 2]
 - ☐ Newly executed (original or copy)
 - ☒ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)
[Note Box 5 below]
 - ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- ☒ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

- ☐ Microfiche Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - ☐ Computer Readable Copy
 - ☐ Paper Copy (identical to computer copy)
 - ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

- ☒ Assignment Papers (cover sheet & document(s))
- ☐ 37 CFR 3.73(b) Statement [] Power of Attorney (when there is an assignee)
- ☐ English Translation Document (if applicable)
- ☒ Information Disclosure Statement (IDS)/PTO-1449 [X] Copies of IDS Citations
- ☒ Preliminary Amendment
- ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
- ☐ Small Entity [] Statement filed in prior application, Status still proper and desired
- ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
- ☐ Other:

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:
☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: 08 / 483,710

18. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label [] or ☒ Correspondence address below
(Insert Customer No. or Attach bar code label here)

NAME	George T. Marcou					
	Kilpatrick Stockton LLP					
ADDRESS	700 13th Street, N.W.					
	Suite 800					
CITY	Washington	STATE	DC	ZIP CODE	20005	
COUNTRY	USA	TELEPHONE	(202) 508-5800	FAX	(202) 508-5858	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL

*Note: Effective October 1, 1997.
Patent fees are subject to annual revision.*

Complete if Known

Application Number	
Filing Date	1/12/98
First Named Inventor	Paul Sidikman
Group Art Unit	
Examiner Name	
Attorney Docket Number	C0464.093809

TOTAL AMOUNT OF PAYMENT	(\$)
-------------------------	------

METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit
Account
Number
Deposit
Account
Name

11-0855

Kilpatrick Stockton LLP

- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance

2. ☒ Payment Enclosed:
☒ Check ☐ Money Order ☐ Other

FEE CALCULATION

1. FILING FEE

	Large Entity	Small Entity
1. Revenue Recognition	Revenue is recognized when the performance obligation is satisfied, which is when control of the goods or services is transferred to the customer.	Revenue is recognized when the performance obligation is satisfied, which is when control of the goods or services is transferred to the customer.
2. Leases	Leases are classified as either finance leases or operating leases. Finance leases are recorded as assets and liabilities, while operating leases are recorded as lease expense.	Leases are classified as either finance leases or operating leases. Finance leases are recorded as assets and liabilities, while operating leases are recorded as lease expense.
3. Goodwill	Goodwill is an intangible asset that arises from the acquisition of a business. It is measured as the excess of the purchase price over the fair value of the identifiable intangible assets.	Goodwill is an intangible asset that arises from the acquisition of a business. It is measured as the excess of the purchase price over the fair value of the identifiable intangible assets.
4. Impairment Testing	Goodwill is tested for impairment annually, or more frequently if events or circumstances indicate that an impairment test may be necessary.	Goodwill is tested for impairment annually, or more frequently if events or circumstances indicate that an impairment test may be necessary.
5. Share-Based Payments	Share-based payments are transactions in which the entity acquires goods or services from the employee by issuing equity instruments.	Share-based payments are transactions in which the entity acquires goods or services from the employee by issuing equity instruments.
6. Financial Instruments	Financial instruments are contracts that give rise to a financial asset or financial liability. They are classified as either debt or equity.	Financial instruments are contracts that give rise to a financial asset or financial liability. They are classified as either debt or equity.
7. Derivatives	Derivatives are financial instruments whose value is derived from the value of an underlying asset or liability. They are classified as either cash-settled or equity-settled.	Derivatives are financial instruments whose value is derived from the value of an underlying asset or liability. They are classified as either cash-settled or equity-settled.
8. Provisions	Provisions are liabilities of uncertain timing or amount. They are recognized when the entity has a present obligation as a result of a past event, and the amount of the obligation can be reliably estimated.	Provisions are liabilities of uncertain timing or amount. They are recognized when the entity has a present obligation as a result of a past event, and the amount of the obligation can be reliably estimated.
9. Contingent Liabilities	Contingent liabilities are liabilities that may arise in the future, depending on the outcome of an uncertain event. They are not recognized in the financial statements.	Contingent liabilities are liabilities that may arise in the future, depending on the outcome of an uncertain event. They are not recognized in the financial statements.
10. Contingent Assets	Contingent assets are assets that may arise in the future, depending on the outcome of an uncertain event. They are not recognized in the financial statements.	Contingent assets are assets that may arise in the future, depending on the outcome of an uncertain event. They are not recognized in the financial statements.

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
101	790	201	395	Utility filing fee	790.00
106	330	206	165	Design filing fee	
107	540	207	270	Plant filing fee	
108	790	208	395	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1)	(\$)	790.00
--------------	------	--------

2. CLAIMS

2. CLAIMS		Extra	Fee from below	Fee Paid
Total Claims	20	-20 = 0	X	--
Independent Claims	2	-3 = 0	X	--
Multiple Dependent Claims			X	--

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
103	22	203	11	Claims in excess of 20
102	82	202	41	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim
109	82	209	41	Reissue independent claims over original patent
110	22	210	11	Reissue claims in excess of 20 over original patent

SUBTOTAL (2)	(\$)	0
--------------	------	---

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	950	217	475	Extension for reply within third month	950.00
118	1,510	218	755	Extension for reply within fourth month	
128	2,060	228	1,030	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,320	241	660	Petition to revive - unintentional	
142	1,320	242	660	Utility issue fee (or reissue)	
143	450	243	225	Design issue fee	
144	670	244	335	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	790	246	395	Filing a submission after final rejection (37 CFR 1.129(a))	
149	790	249	395	For each additional invention to be examined (37 CFR 1.129(b))	

Other fee (specify) _____

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3)	(\$)	950.00
--------------	------	--------

SUBMITTED BY

Typed or Printed Name	George T. Marcou
--------------------------	------------------

Signature

Date _____

Complete (if applicable)

Reg. Number	33,014
-------------	--------

Deposit Account User ID	11-0855
----------------------------	---------

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

C0464/093809

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the U.S. Application of

Paul SIDIKMAN, et al.

Group Art Unit: To Be Assigned

Serial No. Continuation of USSN
08/483,710

Examiner: To Be Assigned

Filed: January 12, 1998

For: METHOD AND SYSTEM FOR PROVIDING INTEGRATED
BROKERAGE AND OTHER FINANCIAL SERVICES THROUGH
CUSTOMER ACTIVATED TERMINALS

Assistant Commissioner For Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to initial examination, please amend the above-identified application as follows:

Please cancel all pending claims without prejudice or disclaimer.

Please add new claims 22-41 as follows.

22. (NEW) A method for a user at an automatic teller machine to obtain securities information and transactions, comprising the steps of:

the user accessing the automatic teller machine;

the automatic teller machine prompting the user with an option to perform securities functions;

the user selecting the option to perform securities functions;

0906339 011398
05210 6630060

the user selecting a securities function from the securities function group;

if the user selects the securities function of obtain information, automatically prompting the user to select one information type from the information type group of holdings, stock quotes, symbol directory, and activity and orders;

the user selecting an information type from the information type group; and
providing to the user information for the selected information type;

if the user selects one securities function from the securities function group of buy securities and sell securities, automatically determining whether the user has established a linked brokerage account;

if the user has established a linked brokerage account, automatically determining whether the user has multiple brokerage accounts;

if the user does not have multiple brokerage accounts, automatically presenting the user with a portfolio profile message;

automatically determining whether a broker system is available;

if a broker system is available, automatically determining whether trading is enabled; and

performing the trading request for enabled trading.

23. (NEW) The method of claim 22, further comprising the steps of:
automatically prompting the user as to whether the user has previously accessed securities functions;
indicating whether the user has previously accessed securities functions; and
if the user has not previously accessed securities functions, automatically providing to the user securities disclosure information.

24. (NEW) The method of claim 22 wherein the step of providing to the user information for the selected information type further includes the steps of:

if the user selects one from the information type group of holdings, stock quotes, and symbol directory, automatically determining whether the user has established a linked brokerage account;

if the user has established a linked brokerage account, automatically determining whether the user has multiple brokerage accounts;

if the user does not have multiple brokerage accounts, automatically presenting the user with a portfolio profile message;

automatically determining whether a broker system is available; and

automatically proceeding with obtaining information from an available broker system for the selected information type.

25. (NEW) The method of claim 22 wherein the step of providing to the user information for the selected information type further includes the steps of:

if the user selects the information type option of activities and orders, automatically prompting the user to select one activities and orders selection from the activities and orders group of open orders, trades awaiting settlement, and recent activity;

the user selecting an activities and orders selection;

automatically determining whether the user has established a linked brokerage account;

if the user has established a linked brokerage account, automatically determining whether the user has multiple brokerage accounts;

if the user does not have multiple brokerage accounts, automatically presenting the user with a portfolio profile message;

automatically determining whether a broker system is available;

selecting a security;
automatically prompting a user as to whether to display the quote for the selected security;
indicating whether to display the quote for the selected security;
automatically determining whether trading is suspended;
automatically determining whether the selected security is tradable on the automatic teller machine; and
automatically proceeding with the buy request for tradeable securities.

34. (NEW) The method of claim 33 wherein the step of automatically proceeding with the buy request for tradeable securities further includes the steps of:

automatically prompting the user to select a number of shares to buy;
selecting a number of shares to buy;
automatically prompting the user to select one from the purchase method group of limit price and market price;
the user selecting a purchase method;
if the user selects the purchase method of limit price, automatically determining whether the limit price is at least the minimum required price;
automatically determining whether the fluctuation of the security is at least the minimum fluctuation;
automatically determining whether a minimum percentage of funds are available for purchase of securities;
automatically prompting the user to determine whether the purchase price is acceptable;
indicating whether the purchase price is acceptable; and
if the purchase price is acceptable, automatically completing the buy request.

35. (NEW) The method of claim 34 wherein the step of automatically completing the buy request further includes the steps of:

automatically prompting the user to specify the parameters of the purchase method selected;

specifying the parameters of the purchase method selected;

automatically prompting the user to select a purchase service option;

selecting a purchase service option;

automatically recapping the buy request;

automatically confirming the buy request; and

automatically placing the order.

36. (NEW) The method of claim 22 wherein, if the user selects the securities function of sell securities, the step of performing the trading request further includes the steps of:

automatically presenting the user with a salable portfolio;

automatically determining whether a salable security is available;

automatically prompting the user to select a security;

selecting a security;

automatically prompting a user as to whether to display the quote for the selected security;

indicating whether to display the quote for the selected security;

automatically presenting the user with a possible duplicate summary;

automatically prompting the user to select a number of shares of salable securities to sell;

selecting a number of salable securities to sell; and

automatically proceeding with the sell request.

37. (NEW) The method of claim 36 wherein the step of automatically proceeding with the sell request further includes the steps of:

automatically determining whether the price of the selected security is at least the minimum required price;

automatically determining whether at least the minimum number of shares selected for sale are selected;

automatically determining whether at least the number of shares selected for sale are held by the user;

automatically prompting the user to select one from the purchase method group of limit price and market price;

the user selecting a purchase method;

if the user selects the purchase method of limit price, automatically determining whether the limit price is at least the minimum required price;

automatically determining whether the fluctuation of the security is at least the minimum fluctuation;

automatically prompting the user to determine whether the sell price is acceptable;

indicating whether the sell price is acceptable; and

if the sell price is acceptable, automatically completing the sell request.

38. (NEW) The method of claim 37 wherein the step of automatically completing the sell request further includes the steps of:

automatically prompting the user to select a sell service option;

selecting a service option;

automatically recapping the sell request;

automatically confirming the sell request; and

automatically placing the order.

39. (NEW) The method of claim 22 wherein the automatic teller machine is a customer activated terminal.

40. (NEW) The method of claim 33 wherein the step of automatically prompting the user to select a security includes the steps of:

automatically prompting the user to provide a symbol;

the user providing a symbol; and

automatically confirming that the provided symbol is acceptable.

41. (NEW) A system for a user at an automatic teller machine to obtain securities information and transactions, comprising:

means for the user to access the automatic teller machine;

means for the automatic teller machine to prompt the user with an option to perform securities functions;

means for the user to select the option to perform securities functions;

means to prompt the user to select a securities function;

means for the user to select a securities function;

means to determine whether the user has established a linked brokerage account; and

means to perform securities functions.

REMARKS

This preliminary amendment is being filed prior to the initial Office Action on the merits. By the foregoing amendment, all pending claims are canceled without prejudice or disclaimer, and new claims 22-41 are added. Thus claims 22-41 are currently pending.

Docket No. C0464/093809

Respectfully submitted,

George T. Marcou
Registration No. 33,014

[illegible]

NOTICE OF COPYRIGHTED MATERIAL IN DISCLOSURE

5 A portion of the disclosure of this patent document contains material which is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent file or records, but otherwise reserves all copyright rights whatsoever.

CROSS-REFERENCE TO RELATED APPLICATION

Reference is made to commonly owned co-pending application entitled "INTEGRATED FULL SERVICE CONSUMER BANKING SYSTEM AND SYSTEM AND METHOD FOR OPENING AN ACCOUNT," Serial No. _____, filed herewith (Attorney Docket No. 107045.003), the disclosure of which is incorporated by reference herein.

FIELD OF THE INVENTION

20 This invention relates to a method and a system
for providing brokerage services through a network of
automated teller machines. In particular, it relates to
a method and system for buying and selling securities and
for obtaining security price quotations.

25 BACKGROUND OF THE INVENTION

In the past, financial services have been made available in various ways depending on the type of service being offered. For a variety of reasons, the methods of providing brokerage services, such as the buying and selling of securities, and of providing traditional banking services, such as depositing and withdrawing funds, have been extremely divergent. For

example, customers usually accessed banking services in the past through person to person service at branch locations. More recently, the trend is toward increased automation of customer banking transactions primarily through use of automatic teller machines (ATMs). On the other hand, many brokerage services are often initiated by direct customer-broker contact, for example, over the telephone or by facsimile. Once an order is received, the brokerage company performs the requested service, such as buying or selling a particular security at the appropriate exchange.

For many customers, dealing with a service provider in person can prove to be burdensome. For instance, in order to buy a particular security, the customer will generally verify the current selling price of a security to be purchased and then contact a broker to request that the purchase be made. One or both of these steps introduces a time lag which may result in the transaction failing to go through as intended by the customer.

Recent technological developments have somewhat improved brokerage services. In particular, improved communications methods have made it easier for a customer to contact a broker to place an orders or to obtain information. Other new methods have also made it easier for the broker to implement orders and to obtain up-to-date information regarding security prices. For example, U.S. Patent Nos. 4,376,978, 4,597,046 and 4,774,663 describe a system for supervising a margin securities account wherein the system verifies various account activities, such as check cashing, and determines available credit so as to maintain free credit cash in one or more short term accounts. U.S. Patent No. 4,674,044 describes an automated securities trading system. U.S. Patent No. 5,270,922 describes a system for

providing financial information such as market ticket, quotation and news information.

While providing many benefits, such prior art systems are generally limited to use by brokers or more sophisticated, affluent consumers who generate a fairly large volume of transactions. Moreover, while keeping track of certain other financial transactions for the purpose of preventing floats, these systems generally lack integration with non-brokerage financial transactions. In particular, most lack any means of providing the functions traditionally made available through a bank teller, such as depositing and receiving funds.

Some attempts have been made both to increase the availability of the financial services to a greater portion of the consumer market and to integrate various financial transactions. For example, the development of networks of automatic teller machines (ATMs) have greatly expanded the hours of operation during which banking services are available, while reducing operating costs. Generally, these machines have been used to reproduce the most common functions traditionally provided by a bank teller, such as receiving deposits, dispensing funds from a customers accounts, and responding to balance inquiries.

The assignee of the present invention has been an industry leader in developing improved techniques for delivery banking services. These techniques have particularly enhanced the customer's means of accessing various banking transactions. Fig. 1A illustrates some of the access points through which such services are made available to customers. These include an enhanced telephone 2, a personal computer 4, and a customer activated terminal (CAT) 6. As shown, the enhanced telephone 2 and the personal computer 4 provide access points to a proprietary service platform 8 known as home

5

10

20

25

envelopes, and a cash dispensing mechanism 26. Internal components include a processor 30 and a communications device 32 for data communication with a host system 10.

The CAT 6 also utilizes more advanced
5 structures in comparison to many conventional ATMs. For example, the primary customer interface is a dynamic touch screen 28 which utilizes color graphics. This interface is more versatile than many other ATMs in that it is readily reconfigurable so as to accommodate
10 changing newly developed functionality. Moreover, it provides an interactive display in which buttons and keys are replaced with images of familiar three-dimensional objects.

It will be appreciated that the enhanced
15 telephone 2 and the personal computer 4 shown in Fig. 1A differ dramatically from the CAT 6 in that the former include no means to perform mechanical functions through a fund depository or a dispensing mechanism. However, all the data terminals illustrated in Fig. 1A, including
20 the CAT 6, the enhanced telephone 2 and the personal computer 4 provide a substantially uniform interface for performing many other financial transactions. These financial transactions include traditional banking functions, such as transferring funds between a checking
25 account and a savings account. Additionally, several of the access points referred to in Fig. 1A can be used to perform "non-traditional" functions, such as bill payment, information retrieval, and access to customer accounts for mutual funds offered by the present assignee
30 and/or its affiliates. In particular, data terminals such as the CAT 6, the enhanced telephone 2, and the personal computer 4, have been used by customers to transfer funds among money market accounts, checking accounts, and savings accounts. They have also been used
35 to purchase, redeem and exchange shares of mutual funds offered by companies affiliated with the assignee of the

present invention. Delayed price quotations through a vendor of such services have also been made available. Thus, these access points form a part of a increasingly integrated financial system.

5 While providing many benefits, the services available through the systems described in reference to Figs. 1A and 1B were limited in several respects. Foremost, no provision was made to buy, sell, or receive price quotations for the vast array of securities
10 publicly available through various exchanges and other financial institutions. Instead, only a limited number of funds were available through an affiliated company. Moreover, being limited primarily to money market
15 accounts, a danger existed that a less-sophisticated customer would not adequately distinguish between a transfer of funds between a federally insured account, such as a standard checking account, and a non-insured account.

SUMMARY OF THE INVENTION

20 In view of the limitations which have characterized previous financial service networks, it is an object of the invention to provide a system and a method for offering brokerage services through an ATM network. In particular it is an object of the invention
25 to provide a system and method by which consumers can readily buy and sell securities, obtain brokerage account information, and obtain current security price information.

30 It is a further object of the invention to offer the above-mentioned services through a preexisting network that is familiar to customers, such as an ATM network.

35 It is yet another object of the invention to conveniently provide brokerage services in conjunction with other financial services, for example, bill payment,

5 In fulfillment of these various objects and
others, disclosed is an integrated financial system
comprising an automated teller machine for providing a
customer interface to the financial system. The
automated teller machine includes processor means, input
10 means for receiving customer information from a customer,
display means for displaying information to the customer,
and a dispenser mechanism, wherein the processor means
receives the customer information and controls the
display and the dispensing mechanism. The system also
15 includes first communication means for remote
transmission of first data from the automated teller
machine to a front end processor system. The front end
system is coupled to the first communication means and
interprets the data from the automated teller machine.
20 It provides data to the automated teller machine whereby
the front end processor system controls a plurality of
customer interactive processes implemented through the
automated teller machine processor means. The system
also includes second communication means for transmission
25 of third data from the front end processor system and a
brokerage system. The brokerage system receives data
from the front end processor system through the second
communications means and provides fourth data thereto.
The brokerage system maintains a record corresponding to
30 a brokerage account, which includes indicia of the number
and type of securities held on behalf of the customer.
Further, the brokerage system receives trade orders from
the customer through the automated teller machine and the
front end system and places orders to implement the
35 orders.

According to a feature of the invention, the integrated system further includes a quotation system for providing securities price information substantially in real time through the brokerage system, the front end processor and the automated teller machine.

According to another feature of the inventor, the system also includes means to compute a current value of securities held on behalf of a customer based on the securities price information, wherein the current value is displayed to the customer with the automated teller machine upon request of the customer.

According to still another feature of the invention, the securities include stocks, bonds, and mutual funds.

According to yet another feature of the invention, the display means and the input means comprise a touch screen display.

According to still another feature of the invention, the system includes means for cross referencing a security symbol with other information, including a security name, in response to a customer request.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

Figure 1A is a block diagram showing various access points for communicating with a front end processor.

Figure 1B is a block diagram showing elements of a customer activated terminal (CAT) which communicates with a front end system.

Figure 2 is a block diagram showing a top level view of a system according to the invention.

Figure 3 is a partial flow chart of a system according to a first embodiment of the invention.

Figure 4 is a continuation of the process illustrated in Figure 3.

Figure 5A to 5D are flow charts illustrating a process for purchasing stocks in accordance with a first embodiment of the invention.

Figures 6A to 6C are flow charts illustrating a process for selling stocks in accordance with a first embodiment of the invention.

Figure 7 is a flow chart showing a process for displaying portfolio information in accordance with a first embodiment of the invention.

Figure 8 is a flow chart illustrating a process for displaying stock quotations in accordance with a first embodiment of the present invention.

Figure 9 is a flow chart illustrating a process for obtaining securities symbols in accordance with a first embodiment of the present invention.

Figure 10 is a flow chart illustrating a process for obtaining activity in orders information in accordance with a first embodiment of the present invention.

Figure 11 is a flow chart illustrating a process for determining opening orders in accordance with a first embodiment of the present invention.

Figure 12 is a flow chart illustrating a process for displaying trades awaiting settlement in accordance with a first embodiment of the present invention.

Figure 13 is a flow chart illustrating a process for displaying recent activity in accordance with a first embodiment of the present invention.

Figure 14 is a more detailed view of a front end processor of a system according to an embodiment of the present invention.

Figure 15 is a block diagram illustrating brokerage system in communication with a front end

processor system according to an embodiment of the present invention.

Figure 16 is a flowchart illustrating a second embodiment of the invention.

5 Figure 17 is a flowchart illustrating a "take action" process according to the second embodiment of the invention.

10 Figures 18A and 18B are flowcharts illustrating a process for selling mutual funds in accordance with a second embodiment of the invention.

Figures 19A to 19C are flowcharts illustrating a process for buying mutual funds in accordance with a second embodiment of the invention.

15 Figures 20A to 20C are flowcharts illustrating a process for exchanging mutual funds in accordance with a second embodiment of the present invention.

20 Figure 21 is a process for obtaining information, including mutual fund and stock quotations, in accordance with a second embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

A. Definitions

25 Exemplary embodiments of the invention are set forth below with reference to the drawings. Merely to facilitate understanding of this description and not for purposes of limitation, the following definitions are provided:

30 Background Message: A message sent from the CAT to the host processor that does not require the CAT to wait for an immediate response. Several such messages are shown in the accompanying flow charts.

ATM (automated teller machine): A terminal used for banking transactions which includes a customer input device (usually a keypad), a card reader, and a

cash dispensing apparatus. An example of a prior art ATM is described in U.S. Reissue Patent No. RE 30,773, the disclosure of which is incorporated by reference herein.

5 BATS (brokerage automated trading system): An automated system used to receive ordered transactions, to record and edit such orders, and to formulate and transmit order messages to a brokerage account manager.

10 BIN (Branch Identification Number): A number embossed and/or encoded on debit and credit cards indicating the institution which issued the card.

15 CAT (Customer Activated Terminal): A customer activated, touch screen terminal utilizing color graphics. This terminal receives input from a customer through a card reader, a depository slot, and touch areas of the touch screen display. It provides an interface to a front end or host computer.

20 CIN (customer identification number): An identification number assigned to a customer that is returned by the host system as part of an account profile message.

CPS (cross product services): A regional interface which provides multi-region access to various applications.

25 ESP (external service provider): A system, usually a FEP, which provides data to the CAT. Most messages usually consist of a request from the CAT and a response from the FEP.

30 FEP (front end processor): A system to which CATs are connected which provide service provider information and network control.

FIMP (financial institution marketing product code): A code returned by the host system as part of an account profiling message which represents the location where the customer's account is processed and serviced.

35 Integrator: A part of a software environment which handles details of message processing to the host

PIN (personal identification number) or PIC (personal identification code): A number selected or provided to a customer which is required to access the system so as to provide system security.

B. System Overview (Fig. 2)

The TPS 54 communicates with a regional interface 56 (referred to as CPS) which provides access to various applications. In the example shown in Fig. 2, CAT orders are sent via the TPS 54 to the CPS 56 region. The CPS 56 provides a gateway to the brokerage system 58 consisting of two linked systems, a Tandem system 60 and a RS6000 system 62. The brokerage system 58 provides information, such as buy and sell orders, which are sent to appropriate persons at various securities exchanges

5

10

C.

1.

20

30

35

option entitled "Securities", which permits the customer to access various brokerage services. In order to ensure compliance with various regulatory requirements, this message preferably includes the disclaimer "not FDIC insured" and can be selected by touching a position of the CAT touch-screen where the message is displayed, thus reenforcing in the customer's mind that he or she is entering a new environment.

When the securities option is selected by the customer, it is determined whether it is the customer's first time accessing the securities environment in a particular session. This information is maintained by the system by updating a variable each time the securities environment is accessed. If it is the first time accessing the securities environment, an appropriate securities disclosure statement is displayed in conformance with various federal and state requirements. For example, the securities disclosure screen notifies the customer that securities are not FDIC insured. The screen also queries the customer whether the customer would like to continue after having viewed the disclosure screen. If not, the customer may return to a previous menu of services provided through the CAT by means of a prompt asking, "May I help you with something else" and a display of YES/NO/EXIT keys on the touch screen. If securities options are desired by the customer, the CAT provides a securities menu.

The securities menu offers the following options: "get information", "buy stocks", or "sell stocks". The "get information" option is explained in greater detail below with reference to Fig. 4. If either the "buy stocks" or "sell stocks" options are selected, the system determines whether the customer has previously opened a brokerage account permitting brokerage activity by consulting a stored record of the customer account information. If the customer has no brokerage account,

an appropriate message, such as "product not available" is displayed, and the customer is returned to other options available through the system. If it is determined that a brokerage account is available, the customer's account information is reviewed to determine whether the customer has multiple brokerage accounts. If so, the system determines which account the customer desires to access by displaying all accounts and prompting the customer to select an appropriate account for which a transaction is to be requested. A portfolio profile message is displayed to the customer indicating the assets included in the selected account. This is accomplished by the system consulting a file containing information regarding the customer's brokerage account. The front end system then determines whether the brokerage system is available. If not, a message indicating that trading is not presently available 24 hours a day, seven days a week is displayed. For example, the system displays a message such as, "I'm sorry, I can't place trades for you from TIME A to TIME B business days and TIME C Sunday to TIME D Monday", where A to D are system variables representing times of the day. The customer is then returned to a previous option menu.

On the other hand, if it is determined that the brokerage system is available, the front end system queries the brokerage system to determine if trading is currently restricted in any respect. For example, the front end system determines whether there are no restrictions on trading, whether only selling is available, or whether no trading whatsoever is permitted based on a data element from the brokerage system. In the latter case, an appropriate message such as "no trades are now allowed" is displayed and the customer is returned to a previous options menu. On the other hand, if buying and/or selling is permitted, either the buying

stocks process shown at Figs. 5A to 5D, or the selling stocks option shown at Figs. 6A to 6C are implemented.

If the customer wishes to obtain information by selecting a "get information" option from the securities menu, the customer is provided with options illustrated in Fig. 4. These options include a "holdings" option, a "stock quotes" option, and a "symbol directory" option, and an "activity and orders" option. In the event that the "activity and orders" option is selected, the process continues as shown in Fig. 10, described below.

If any of the first three options are selected, the system determines whether the customer has a brokerage account, as described above. If not, the "product not available" screen is displayed and the customer is returned to a previous options menu. If the customer has at least one brokerage account, it is then determined how many different accounts are available. If more than one is available, the system prompts the customer to select the account for which information is being requested in the manner described above. Once an account is selected in this manner, account profile information is displayed to the customer as described above in Fig. 3.

The front end system then determines whether the brokerage system is available for providing the requested information. If not, an appropriate message is displayed as described above and the customer is returned to a previous options menu. If the brokerage system is available, the process continues as shown in Fig. 7, Fig. 8 or Fig. 9, depending on which respective option, "holdings", "stock quotes", or "symbol directory", had been selected by the customer.

As shown in Fig. 7, if the "holdings" options had been selected, a portfolio inquiry is made by the system and an response showing each holding and total asset value is displayed based on data segments provided

5

15

	Next line (max to N+4)	{account}	"short", "margin", "pledged" (displayed only if appropriate);
5	Next line (max to N+5)	zz,zzz,zz9.zzz at zzzz9.zzz	1st variable, number of shares; 2nd variable, share price (if security unpriced, display "Unpriced" instead of "at z.zz9.zzz"); 3rd variable, NAV (displayed for Mutual Funds only)
10	Next line (max to N+6)	"Value:" \$zzz,zzz,zz9.99	variable, security value (if security unpriced, display "Unpriced" instead of "Value:" zzz,zzz,zz9.99);
15	Next line (max to N+7)	{Annuities Disclosure}	If a fixed annuity <u>only</u> , display "Your fixed annuities are reported here with your other non-FDIC insured investments for your convenience, even though they are not securities"

After all securities have been displayed, totals are provided, in the following order:

- 1) If customer has at least one fully owned/cash account security, "Market value of Securities, \$zzz,zzz,zz9.99" is displayed. If at least one security is unpriced, a disclaimer, "Not including unpriced securities", is also displayed;
- 2) If the customer has a cash balance, "Cash balance \$zzz,zzz,zz9.99" is displayed;
- 3) If the customer has a credit interest balance, "Credit interest balance \$zzz,zzz,zz9.99" is displayed;

4) If customer has at least one margined security, "Margin account balance, \$zzz,zzz,zz9.99" is displayed.

5) If customer has at least one shorted security, "Short account balance, \$zzz,zzz,zz9.99" is displayed.

6) If customer has at least one security pledged to a secured non-purpose loan, "Pledged balance, \$zzz,zzz,zz9.99" is displayed.

After all securities have been displayed, "Total portfolio value, \$zzz,zzz,zz9.99" is displayed.

If at least one security is unpriced, a disclaimer, such as "Not including unpriced securities", is also displayed. The holdings screen also indicates that this action has been completed and prompts the user to indicate whether further actions are desired.

If the "quotes" option was selected from the "get information" menu, the process continues as shown in Fig. 8. First, it is determined whether trading is available as described above in Fig. 3. If not, the user may return to a previous options menu. If trading is available, it is determined whether the customer has reached a predetermined daily maximum number of quotes. For example, the system keeps track of the number of quotes obtained by the customer by updating an appropriate variable each time that quotation information is conveyed to the customer. If the maximum number of quotations has been reached, a message is displayed informing the customer of the maximum amount permitted and the customer is returned to an earlier menu. Otherwise, the system continues as shown in Fig. 8. This prevents a customer from tying up the CAT terminal.

If securities are available for sale, a "tell stocks symbol" screen is displayed. This screen prompts entry of up to five stock symbols, by displaying the header "please tell me the stock symbols." Each symbol

correspondence to a particular security. As an added feature, the system also informs the customer that up to five quotes can be requested at a time. If the customer has fewer than five quotes (one to four) remaining, the header indicates "I can give you N more today" where N is the appropriate number of quotes remaining in the customer's allowance from 1 to 4. In this way, the customer is informed how many additional quotes are available.

10 The customer then enters the stock symbol of each security for which the customer desires to obtain a quotation. Preferably, this entry is input through a "keyboard" displayed on the touch screen input of the CAT. As shown in Fig. 8, the customer is also provided with the options of using the symbol directory to look up the appropriate symbol for a given security or of returning to our earlier options menu. If the customer wishes to consult the symbols directory, the process continues as shown in Fig. 9. Once the appropriate symbol for each security has been entered, the information corresponding to the selected securities are sent to the brokerage system, and price quotations are obtained. In obtaining quotations, the system determines whether a connection to the quotation service is currently available. If not, the system indicates to the customer that the service is unavailable, and the customer is returned to an earlier screen. If the service is available, a price quotation is provided to the customer. For example, information such as the daily high, the daily low, the last available price, the change from the previous day and the total volume of trading for each security may be provided. An example of the "here are quotes" screen referred to in Fig. 8 follows:

Line	Text	Comments
2	"Okay. There are your quotes"	
4	{Categories}	Symbol, plus, generally, "Day High; Day Low; Last; Change; and Volume (100s)";
5 6-7 (and following, if additional stocks)	1st line 2nd line	Stock Quote data, if available; If no data for a symbol, "I'm sorry. I can't find a quote for this symbol"

As mentioned above, the customer is given the option of looking up a symbol for a particular security. For example, a "want symbol look-up" screen is displayed if the customer presses "ENTER" without having entered any stock symbols on the sell stock symbol screen. At this point, the system prompts "would you like to see the stock symbol directory." Selection of "yes" displays the symbol "look-up arguments" screen as shown in Fig. 9.

As illustrated in Fig. 9, the symbol look-up screen is displayed after: (1) selection of symbol directory from the "get securities information" screen; (2) selection of "let's start at another letter" from the symbol look-up list screen; or (3) selection of "YES" from the "want symbol look-up" screen in Fig. 8. The "symbol look-up argument" screen prompts entry of at least one, and at most 28 letters of a security's name using an alpha-numeric keyboard displayed on the touch screen of a CAT. Preferably, the ATM machine is programmed so that if a non-alphabetical character key is depressed, an error indication is provided, such as an audible tone. Once at least one letter has been pressed and an "ENTER" function key is pressed, a query is sent

to the front end to look up a stored list of security names beginning with the entered letter(s). The system provides a symbol look-up list screen. If at least one exact match exists with the name entered, the first match is displayed followed by the next three listings. If no exact matches exist, the next closest name is displayed, followed by the next three listings.

The "symbol look-up list" screen displays up to four stocks (common and preferred) per screen, and includes full backward and forward scrolling capability for all stocks beginning with the name or name fragment entered by the customer. The display is in alphabetical order by security name, not by symbol. Once the symbol list has been displayed, the customer is given the option of inputting another request.

If another request is desired, the "symbol look-up arguments" screen is again displayed. On the other hand, if no additional request is required, the system determines the point from which the symbol look-up process was accessed. If accessed from the quotes menu, the process returns to the "tell stock symbols" menu shown in Fig. 8. If the system entered the symbol look-up menu from the stocks menu, the system returns to Fig. 5A. If the system entered the symbol look-up menu from Fig. 4, it is presumed that the customer has obtained the information requested and the process resumes at an appropriate conventional options menu.

Accordingly, Figs. 4, 7, 8, and 9 demonstrate how holdings, quotes, and symbol look-up functions are available through the system. Fig. 10 (carried over from the activity in orders menu shown in Fig. 4), illustrates how activity in orders information can be displayed to the customer. This menu provides the customer with the option of determining any open orders, any trades awaiting settlement, or any recent activity. As shown in Fig. 10, the selection of one of these three options

prompts the system to determine whether the customer has a brokerage account or multiple brokerage accounts as explained above in reference to Fig. 3. It also determines whether the brokerage provider is available as explained above. Once this information has been verified, the system proceeds with the open orders menu described in Fig. 11, the trades awaiting settlement menu described in Fig. 12, or the recent activity menu described in Fig. 13.

The "open orders" menu shown in Fig. 11 is displayed following selection of "open orders" from the orders and activity screen when at least one open order exists, including those initiated by other customer interface terminals apart from the ATM.

This menu permits the customer to receive information stored in a file maintained by CPS. This information keeps track of all orders placed and their status.

As shown, the open orders request is sent to the system which determines whether any open orders exist. If none exist, then the system returns to an earlier options menu. If open orders do exist, information relating to the orders is provided. For example, the system displays the type of order (buy, sell, buy to open, buy to close, sell to open, sell to close, margin buy, and margin sell), the size of the order, the name of the security, the type of security (for example, mutual fund or stock) whether the price of the security is at a predetermined limit, the duration of the order, the date the order was placed, whether the order has been partially executed, and any other qualifying information which may be appropriate. More particularly, as few as one open order and up to two orders may be displayed per screen. Expired, cancelled or killed orders may also be displayed. An exemplary screen indicating the open orders display follows:

Line	Text or {SDE}	Comments
1-2	"Here are your Open Orders (any order may have been executed) "	
N	{type of order} {size of order}	1st variable, "buy", "sell", "buy to open", "buy to close", "sell to open", "sell to close", "short", "exchange", "margin buy", "margin sell"; 2nd variable, "Qty: zz,zzz,zz9.zzz" (if not \$ trans) or \$zzz,zzz,zz9.99 (if \$ trans)
5 N+1 (max through N+4)	{Security Name} XXXXXX	1st variable, as transmitted: for most securities, X(30); for pref stock, 2●X(30); for mutual funds, 2●X(30); - for an exchange of mutual funds, each fund name displayed 2●X(30), along with: "From: [fund name]" and "To: [fund name]"; for muni bonds, 4●X(30); for T Notes/T Bonds, X(30)+z9.999% Due MM/DD/YY; for T Bills, X(30)+Dated MM/DD/YY Due MM/DD/YY 2nd variable: "shares" if stock or mutual fund; otherwise suppressed

107045 004 27113 1

next line (max to N+10)	{Status}	As transmitted (if any): -Pending -order sent to the exchange -Cancellation request sent to the exchange -Cancelled -Cancelled by exchange or clearing broker -There's a problem. Please contact xxxxxx [SDE, consult] -Option expired -Order expired unfilled -Order will be placed when the market opens -Order partially executed
----------------------------	----------	---

Once the open order screen has been displayed,
the customer can opt to return to an appropriate options
5 menu.

Fig. 12 describes a trades awaiting settlement
display process. This process permit the user to receive
information stored by the system to keep track of trades
that have not yet been undergone settlement. As shown, a
10 "here are trades awaiting settlement" screen is displayed
following selection of "trades awaiting settlement" from
the "orders and activity" screen when at least one
executed order awaits settlement. This screen displays
all trades awaiting settlement, including those initiated
15 by means other than an ATM. As shown in Fig. 12, if no
orders or activity exists, the customer is returned to an
earlier menu. If trades awaiting settlement are
available, the following information is displayed:

<u>Line</u>	<u>Text or {SDE}</u>	<u>Comments</u>
1	"Here are your Trades Awaiting Settlement:"	
N	xxx z9 {type of order}	1st variable, trade date; 2nd variable, "Bought", "Sold", "Bought to Open", "Bought to Close", "Sold to Open", "Sold to Close", "Shorted", "Exchanged", "Bought on margin", "Sold on margin"; + (if partial only), "Partial"

0900639 011298
862110 6E89060

09006339 011298

5

N+1 (Max through N+4)	xxx z9; {Security Name} xxxxxxx	1st variable, trade date; 2nd variable, as transmitted: for most securities, X(30); for preferred stock, 2●X(30); for mutual funds, 2●X(30); - for an exchange of mutual funds, each fund name displayed 2●X(30), along with: "From: [fund name]" and "To: [fund name]"; for muni bonds, 4●X(30); for T Notes/T Bonds, X(30)+z9.999% Due MM/DD/YY; for T Bills, X(30)+Dated MM/DD/YY Due MM/DD/YY 3rd variable: "shares" if stock or mutual fund; otherwise suppressed
next line (max through N=5)	"zz,zzz,zz9.zzz" "at z,zz9,zzz" \$zz,zzz,zz9.99	1st variable, quantity; 2nd variable, unit price (if security unpriced, display "Unpriced" instead of "at z,zz9.zzz"); 3rd variable, security unpriced, display "Unpriced" instead of "Value:" zz,zzz,zz9.99).
next line (max through N+7)	Commission: \$zzz9.99	Commissions (line suppressed if zero) Note: SEC fees are not displayed

next line (max through N+8)		For Bond purchase or sale only, "Accrued interest may have been xxxxxxx" (charged; received) -otherwise, suppressed
--------------------------------	--	--

Fig. 13 shows the recent activity menu which is available following selection of "recent activity" from the orders and activities menu in Fig. 10. As shown, a recent activity message is sent to the front end system which determines whether any recent activity exists over a predetermined period. If not, an appropriate message is displayed to the customer, and the customer has the option of returning an earlier menu. If recent activity does exist, the recent brokerage activity is displayed to the customer, for example, as follows:

<u>Line</u>	<u>Text or {SDE}</u>	<u>Comments</u>
1	"Here is your recent Brokerage activity:"	

N	<p>{date MMM DD}</p> <p>xxxxxxxxxxxxxxxxxx</p>	<p>1st variable, Settlement date, if a trade; otherwise, Posting Date</p> <p>2nd variable, "Bought", "Sold", "Exchanged", "Bought on margin", "Sold on margin", "Interest", "Dividends", "Delivered", "Received", "Dividend Reinvested", "Journal Item"</p> <p>(Additional items may be transmitted to CAT and interpreted for display)</p>
---	--	---

09006239.01298
SECTO"SE290050

86210"62890060

<p>N+1 (max through N+4)</p>	<p>xxxxxxxxxxxxx MMM DD {Security Name} xxxxxxx</p>	<p>1st variable, "Trade date" MMM DD", displayed only if a trade;</p> <p>2nd variable, as transmitted: for most securities, X(30); for preferred stock, 2●X(30); for mutual funds, 2●X(30); - for an exchange of mutual funds, each fund name displayed 2●X(30), along with: "From: [fund name]" and "To: [fund name]"; for muni bonds, 4●X(30); for T Notes/T Bonds, X(30)+z9.999% Due MM/DD/YY; for T Bills, X(30)+Dated NN/DD/YY Due MM/DD/YY</p> <p>3rd variable: "shares" if stock or mutual fund; otherwise suppressed</p>
<p>Next two lines (max to N+6)</p>	<p>zz,zzz,zz9.zzz xxxxxxx at: \$z,zz9.zzz xxx xxxxxx</p>	<p>1st variable, quantity; 2nd variable, "shares" (suppressed unless interest or dividend); 3rd variable, unit price (if security unpriced, display "Unpriced" instead of "at z,zz9.zzz"; suppress if delivered/received transaction); 4th variable, "per share" (suppressed unless interest or dividend).</p>

5

10

15

107045 004 27113 1

of a stock symbol of one to seven characters using a "keyboard" displayed on the CAT's touch screen. If no symbols are entered, the customer is given the option of selecting a symbol from the directory.

5 If the "select symbol" option is selected, the system implements the process described above in reference to Fig. 9. On the other hand, if a symbol is entered, the system looks up the symbol entered to determine which security is being requested for purchase,
10 and then sends a request for current price quotation for that security. In doing so, the system first determines whether the quotation system is on-line. If not, a suitable message is displayed to the customer and the customer is returned to an earlier options menu. If the
15 quotation system is operational, it is determined whether the symbol entered by the customer is recognized by the system. If not, the customer is given the option of using the symbol directory in accordance with the process described in Fig. 9. Once the appropriate symbol has
20 been entered and the real-time quotation system is operational, a real-time quote is provided from the quotation system.

 If the symbol entered by the customer corresponds to a stock whose latest available price is
25 less than a predetermined amount, such as \$1.00, the system displays a screen stating "I'm sorry...I can't accept trades of stocks priced under \$1.00 per share here." The system preferably then displays a referral to a customer service representative for further assistance
30 to the customer and returns the customer to an earlier option menu.

 It is then determined whether the symbol entered by the customer corresponds to a stock or other type of security that cannot be traded with the system.
35 If so, the system displays a message such as "I'm sorry...I can't handle purchases or sales of this class

0900639.01298
86270.6290050

of stock here." Again, the system preferably displays an appropriate referral for the customer further assistance.

The system further determines whether trading has been suspended of the appropriate exchange. If trading has been suspended or if it has been restricted to certain activities, an appropriate message is displayed and the customer is returned to an earlier options menu. Similarly, the system determines if the requested security can be traded with the CAT.

If the price is over the predetermined limit, trading is not suspended, and the requested security is available for trading with the system, an appropriate message is sent to the customer. The system requests how many shares the customer wishes to buy as shown Fig. 5B. At this point, the system checks to see if an entered number of shares to be bought is above a predetermined maximum shares. If so, the system displays the maximum number of shares permitted for trading and returns the customer to an earlier options menu to further proceed. If the entered number is less than the predetermined maximum number permitted by the system, a "market/limit" screen is displayed which states "how do you want to buy the shares" and displays one of two options -- market or limit. The selection of a limit button displayed on the touch screen results in a "limit price screen" described below. Selection of a displayed market button initiates various checks for order acceptability based on the following: total price (based on latest available price) in comparison with a predetermined amount; and (2) a check against the customer's brokerage account in order to determine whether the customer has funds available to satisfy the purchase. Alternatively, the system may determine whether the available funds within a predetermined range of the current price check is not applicable to the customer. If the order passes these checks, the system proceeds as shown in Fig. 5C

5
10
15
20

25

30

35

length of time the customer desires the order to be in effect. The customer is given the options of "today only" or "good 'til order cancelled" (GTC). The latter option permits the customer to specify a future date at which the order will be cancelled if it has not previously been performed. Upon selection of either option, or if the customer has previously selected the "market" option, the system preferably determines whether the customer is provided discount service or full service. If the customer has a full service account, the system asks the customer whether an investment consultant recommended the purchase. The customer's answer is logged for internal use and a "stock recap" screen is displayed.

The stock recap screen is displayed after selection of either the "limit" or "market" options. This screen displays the following text:

<u>Line</u>	<u>Text or {SDE}</u>	<u>Comments</u>
1	"Okay, here's the order I have for you"	
4	xxxx: zz,zzz,zz9 shares	variables, "Buy" or "Sell", and the number of shares
5	"of:" 2●X(30)	variable, the stock name
7	"Symbol:" xxxxxx	variable, the symbol symbol
8	"As follows:" xxxxxxxx	variables, "At Market" or "Limit" and limit price if "Limit"
next line	xxxxxxxxxxxxxxxxxxxx	variable, "Day Order" or "Good till cancelled" (suppressed unless Limit Order)

next line (max 10)	{Solicited}	If Full Service customer and solicited = "yes", display "I.C. Recommended"; otherwise, suppress
-----------------------	-------------	--

Once the screen is displayed, the system asks the customer whether to go ahead and place the order.

- 5 Selection of "no" in response to this message displays a change or cancelled screen.

- The change of cancelled screen is displayed after selection of "no" on the stock recap screen. It provides the customer the option of either changing the order or cancelling the order. Changing the order discards all order information except for the security name and returns the customer to the "how many shares" screen. Selection of a "cancel order" option discards the order and causes the display of a "won't place the order" message. The customer is then returned to an earlier option menu. If the customer indicates that the customer wishes to place the order, the system sends the order out for final edit checking. If the order passes various host error checks described below and the information is successfully returned to the ATM, the "have your order" screen is displayed as described below. This screen notifies the customer that the order has been transmitted for placement by the brokerage service provider. If the order fails any error checks or fails to transmit, an "exception to screen" is displayed.
- 10
15
20
25

- The first error check implemented by the host system determines whether the customer's order is a possible duplicate. To perform this operation, the system checks the open orders and trades awaiting settlement information as described above. The possible duplicate screen recaps the previous open orders/trade and displays all information provided on either the "here
- 30

are open orders" or "here are trades awaiting settlement" screens described above. If more than one possible duplicate order exists, the possible duplicate screen gives the customer the option of continuing through each duplicate which has been found. Once all possible duplicate orders have been reviewed by the customer, the system asks whether it should go ahead with the new order. If the customer responds affirmatively, the process continues. If the customer selects "no" the system displays the "won't place" order screen and returns the customer to an earlier options menu.

The next error check performed by the system verifies the customer's personal identification code (PIC). Specifically, the customer is prompted to re-enter his or her PIC in order to proceed with the transaction. The system consults which cross references the customer's PIC with the information previously provided by the customer to ensure that this information matches. Once a valid PIC has been accurately entered, the system continues as shown in Fig. 5D

As shown in Fig. 5D, a "send trade" message is sent once the aforementioned error checks have been performed by the system. This prompts the system to determine whether the customer has first selected a security which has previously been deemed to be restrictive. If so, the trade is rejected and the customer is returned to an earlier options menu. If not, the system determines whether the host brokerage system is available. If it is unavailable, an appropriate message is displayed and the customer is returned to an earlier options menu. If the system is available, the process continues by determining whether there is any uncertainty as to the probability that the order will successfully go through. If so the customer is provided with an appropriate message and then returned to an earlier option menu. If no uncertainty is determined at

this step, the order is placed and a confirmation is provided to the customer. The customer then may return to an earlier options menu.

In this manner, the customer may conveniently place purchase orders for immediate purchase or at a predetermined price. These options are conveniently provided to the customer through an existing platform in conjunction with several safeguards designed to ensure both that the trade will go through as requested and that the customer has sufficient funds to cover the transaction.

The "sell stocks" option is described in Figs. 6A to 6C. As shown, the selection of a "sell stocks" option from the securities menu screen displays a "which stock to sell" screen once the system has determined which currently tradeable stocks are held in the customer's brokerage account. Specifically, the system sends the information corresponding to the customer's saleable portfolio and the system determines whether it is saleable over the ATM network. If not, a "no saleable stock found" message is provided to the customer and the customer is returned to an earlier options menu.

If the customer does have a saleable stock, the "which stock to sell" menu prompts the customer to select one of the saleable stocks. The system also displays the most recent price of the stocks which are saleable. Specifically, the system sends a request for a real time quote and determines whether the quotation service is available. If not, a message is displayed indicating that the system cannot perform a "sell" transaction and the customer is returned to an earlier options menu. The system performs various error checks such as those described above in reference to the "buy stock" option. Specifically, the system sends a possible duplicate summary and then displays a "how many shares" menu.

As shown in Fig. 6B, the process continues by determining whether the price of the stock which the customer wishes to sell is less than a predetermined amount, such as \$1.00. If so, the system displays a "can't trade under \$1.00" message and returns the customer to an earlier options menu. The system further determines whether the number of shares entered is greater than a predetermined maximum number of shares. If so, a maximum share number is displayed to the customer and the customer is returned to an earlier options menu. If the requested amount is below the maximum limit, it is determined whether the number of shares that the customer wishes to sell is above a minimum number. If an insufficient number is requested, the customer is returned to an earlier options menu. If the number of shares is above the minimum and meets the previously described criteria, the system displays a "market limit" screen. This screen asks the customer "how do you want to sell the shares" and prompts the customer to select either a "market" button or a "limit" button. Selection of the "limit" button results in display of the limit price screen. Selection of the "market" button initiates edit checks for order acceptability based on criteria described below.

The limit price screen provides the customer with the option of inputting a desired price at which the customer wishes to sell the selected security. Specifically, the CAT displays a numeric keypad which includes fractional dollar amounts such as 1/8, 1/4, 3/8, 1/2 and so forth. The system prompts the customer to enter a limit price using this display. Once the customer has entered a limit price the system determines whether the price is within a predetermined fraction of the current security value. For example, if the limit is 20% greater than the current price the system displays a "too much for a limit" screen. This notifies the

5

10

15

25

30

35

As shown in Fig. 6C, once the stock recap has been displayed the customer is asked whether or not to place the order. If the customer indicates not to place the order, the customer is asked whether to change or cancel the order. If the order is cancelled, this request is confirmed and the customer is returned to an earlier options menu. If the customer wishes to change the order the system returns to the "how many shares menu. If the customer confirms that it is desired to place the order then the system checks for possible duplicates in a manner similar to that described above in reference to the "buy shares" option.

30 If the customer has sufficient shares to cover
the newly-requested transactions, a "possible duplicates"
screen is displayed. This screen recaps previous "open
order/trade awaiting settlement" request, displaying all
information provided on the "here are open orders" screen
or "here are the trades awaiting settlement" screen which
are displayed in response to the "get information"
35 option.

Once this information has been relayed to the customer, the customer is asked whether to go ahead and place a new order. If the customer indicates not to place a new order, a confirmation message is sent to the customer, and the customer is returned to an earlier options menu. If the customer confirms that a new order is desired, the customer is asked to re-enter his or her PIC. Once the customer's PIC is correctly re-entered, a "send trade" message is sent to the brokerage system.

At this point the system determines whether the security which the customer has requested to be sold is restricted, whether the host system is available, and whether any uncertainty exists as to the likelihood that the transaction will proceed. For example, as shown, if the stock is determined to be restricted a "trade rejected due to encumbrance" message is displayed. If the host system is unavailable, a "trading system unavailable" message is displayed. If any uncertainty exists, a "may be a problem" is displayed. If any of these errors occur, the customer is returned to an earlier options menu.

If no problems occur, the customer's "sell" order is confirmed. The customer is then returned to an earlier options menu for further actions.

In accordance with this method, a customer may obtain current securities price information and current portfolio value, buy securities and/or sell securities without directly contacting a broker. The customer may further obtain standard banking functions such as balance inquiries, transfers, deposits and withdrawals, all at the same location. The system according to the invention thus provides most standard brokerage functions within an environment already familiar to the customer.

2. Second Embodiment (Figs. 16-21)

A second embodiment of the invention is now described with reference to Figs. 16 to 21. As set forth

in more detail below, this system permits a customer not only to trade stocks and bonds through an ATM network, but also to perform functions relating to mutual funds. More specifically, the system keeps track of the

5 following information: the status of a particular fund, for example, whether it is open to all purchasers or only to current holders; the availability of more than one fund in a fund family; the existence of any exchangeable sub-group of funds in a fund family; any breakpoint of a

10 fund and the amount; any minimum amount for first time purchases, IRA purchases, or any higher minimum amount set by the broker system; load information, such whether any front end or back end loads exist; any maximum transaction fees for purchase, redemption or exchange of

15 no load funds; any redemption fees for front end load funds; any redemption restrictions; any promotions available on purchases and, if applicable, the promotion start and end dates; the availability of any hourly trading; any per day fund purchase maximum, and if

20 applicable, the amount; and the minimum amount of in a customer's account in order to make a purchase. This information is maintained in records stored in a front end system and/or a brokerage system. Data elements representing this information is transmitted between

25 these systems and to a customer using a CAT. These features and others are made apparent from the following description.

Fig. 16 is a top-level flowchart for accessing a "securities" option in accordance with the second

30 embodiment of the invention. As shown, the system determines whether it is the customer's first time accessing the securities option in a particular session. If so, a securities disclosure screen is provided to the customer in a manner similar to that described with

35 regard to Fig. 3. The customer then is provided a securities menu, which instructs the customer to either

"get information" or to "take action". The "get information" process is described below with reference to Fig. 21. The "take action" process continues as shown in Fig. 17.

5 As shown in Fig. 17, the user is given the option of selecting one of three options: a "buy" option, a "sell" option, and an "exchange" option. The exchange process continues as described below in reference to Fig. 20A. If either the "buy" or "sell" options are selected, the system determines which type of security the customer wishes to buy or sell. Specifically, the customer is given the option to buy or sell stocks, mutual funds, or funds offered through a company affiliated with the bank (that is, a family of funds from an affiliated company). The latter option involves a process similar to the one referred to in the background of the invention. Selection of the first option, that is, the selection of trading stocks, results in a process similar to that described in reference to Figs. 5A-5D and 6A-6C of the first embodiment of the invention. The process for selling mutual funds is described in reference to Figs. 18A and 18B, and the process for buying mutual funds is described in reference to Figs. 19A and 19B.

25 As shown in Fig. 18A, the process for selling mutual funds according to this example first involves determining whether the customer has any mutual funds in his or her brokerage account. If not, a "no stocks or funds found" screen is displayed to the customer and the customer is given the option to return to an earlier options menu. If the customer does have at least one saleable fund, the system displays all saleable funds that are available and prompts the user to select which fund to sell.

35 Based on this selection, the system determines whether the NAV of the fund is greater than zero. If the

5

10

20

5 In a similar manner, if the customer requests
to sell by dollar amount, the system determines whether
the requested amount is greater than the asset value of
the customer's holdings. If so, the customer is given
the option of inputting a new amount. If the customer
has input an amount equal to or less than the dollar
value of the customer's holdings, the system then
determines whether the amount entered is more than a
predetermined percentage, for example, 90 percent (90%)
10 of the customer's account balance. If so, the system
indicates that only up to 90 percent of the customer's
account value may be redeemed, and the customer is given
the option of trying again. Once a valid amount has been
entered, the process continues as shown in Fig. 18B.

15 As indicated in Fig. 18B, the process then
determines if the requested amount is within
preestablished system parameters; for example, a
predetermined maximum and a predetermined minimum dollar
amount. If the requested transaction is greater than a
20 maximum amount, an appropriate message is displayed which
informs the customer of the maximum amount and a
consultant to contact directly to perform the
transaction. If the requested amount is below the
minimum amount, the system displays an appropriate
25 message depending on whether the customer requested the
sale by dollar or by amount. For example, the system
will display the minimum amount necessary for a sale by
dollar value or by share amount and the customer is
returned to an earlier option.

30 If the fund was a back-end fund, the system
informs the customer of the amount to be deducted to
cover the fee, and the customer is given the option of
quitting the process. If the customer desires to
continue, or if no back-end fee is applicable, the system
35 then determines whether the customer has a full-service
account. If so, the system requests that the customer

5
10
15
20
25
30
35

If no restrictions are present and the customer desires to proceed, the order is placed and an appropriate message is displayed to the customer. The customer may then return to another options menu.

5 The process for buying mutual funds is described in the flowcharts spanning Figs. 19A-19C. As shown in Fig. 19A, the system first determines whether the customer already owns any mutual funds. If a new fund is selected, the system either displays a message
10 requesting the customer to contact a consultant about purchasing new funds or prompts the user to input a mutual fund symbol. The system then determines whether the inputted symbol matches a name stored in the system's directory. If not, the user is informed that no match
15 was found and is given the option of trying again. If more than one fund is found, the user is given the option of selecting one matching fund.

 Once a new fund has been selected in this manner, the system determines whether the fund is open
20 for purchase. This involves determining whether the fund is available only to current holders, whether it is not open to new purchase, whether it is restricted due to "blue sky" restrictions, whether the selected fund is an off-shore fund requiring consultation, or if any other
25 system restrictions exist. Once each applicable restriction has been displayed to the user, the customer is returned to an earlier options menu.

 If the fund is open for sale, the system determines whether the user already owns any shares of
30 the selected fund. If no shares are already owned, the customer is asked whether the customer has received a prospectus. If not, the customer is informed that no purchase is permitted until a prospectus has been reviewed by the customer and the customer is returned to
35 an earlier options menu.

25 If the customer chooses to continue with the
purchase the system requests that the customer input the
amount of purchase. The system then verifies that the
requested amount is within predetermined parameters, such
as a maximum and a minimum dollar amount. If the
30 requested amount is below a minimum dollar amount, the
minimum amount is displayed to the customer and the
customer is given the option of inputting a greater
amount. If the customer selects an amount which is
greater than the maximum amount, the maximum amount is
35 displayed to the customer and the customer is returned to
an earlier options menu.

0000639 011298

If the amount selected by the customer is within the system parameters, the system continues depending on whether a front-end load is applicable. If a front-end load applies to the purchase, the sales charges for the purchase is displayed. If applicable for the selected fund, the system may also display a breakpoint. As known in the art, the breakpoint provides for a reduced fee if the purchaser or members of the purchaser's family have more than a fixed amount in the family of funds. The customer is given the option of indicating whether he or she feels that a reduced fee is available. If so, the customer is provided with a referral to contact in order to fill out a letter of intent (LOI). If the customer has already filled out such a letter of intent, or if no reduced fee is available, the customer is given the option of continuing.

The purchase process continues by determining whether the requested purchase is an initial purchase for the selected fund. If so, the customer is prompted to indicate whether to reinvest or transfer dividends to another account. A similar selection is made for future capital gains. If it is not the initial purchase, the previous selections are maintained. The system then determines whether the customer has a full-service account in order to obtain the information mentioned above. If the customer does not have a full-service account, or the customer has indicated whether or not a consultant had been contacted, the process continues as shown in Fig. 19C.

As shown in Fig. 19C, the process determines whether any similar orders exist. If so, the system determines whether the requested purchase amount is over a daily fund maximum. If so, the daily fund maximum amount is displayed and the customer is given the option of performing another transaction or of quitting. If the

requested amount is below the daily maximum, the customer is informed that a possible duplicate might exist. By displaying the purchase amount, the security, the source and destination, and the time at which the transaction will take place. The customer is prompted to review each possible duplicate and to indicate whether or not to continue. Once this process has taken place, the customer may proceed. The system then displays a recap of the requested purchase, including the amount, security name, and any applicable purchase fee. The customer is then requested to confirm that it is desired to complete the transaction.

If the customer desires to proceed with the requested buy order, the system verifies whether any restrictions are applicable. For example, the system determines whether a confirmation has been received, whether the system has imposed any restrictions, whether the channels through which the purchase is made are unavailable, or whether it is necessary to contact a consultant. If each of these criteria are met, the system indicates that the order has been placed and the customer may then return to an earlier options menu.

The process for exchanging mutual funds is illustrated in the flowcharts of Figs. 20A-20C. As shown in Fig. 20A, it is first determined whether the customer has any saleable funds. If not, an appropriate message is displayed to the customer who may then return to a previous options menu. If the customer has at least one saleable fund, the customer's saleable funds are displayed, and the customer is prompted to select a fund from which an exchange is to be made. Once a "from" fund has been selected, the system determines whether any other funds in the fund family are available for exchange. If not, a message is displayed indicating that the selected fund is the only fund in the family. If

other funds are available, a list is displayed for the customer to select from.

Once the customer indicates a particular fund as a "to" fund, the system determines whether the NAV of the "from" fund is greater than zero. If not, an appropriate message is displayed and the customer is asked to contact a consultant. If the NAV is greater than zero, then the system determines whether the "from" fund has an open order to be fully liquidated. If so, the system displays the outstanding order to liquidate and the customer is returned to an earlier options menu.

If meeting the previously described criteria, the system then determines whether the "to" fund is already owned by the customer. If not, the system determines whether the customer is eligible to proceed. If not eligible to proceed, a message is displayed indicating that the customer should contact an appropriate consultant. If configured for new funds, the customer is asked whether a prospectus for the selected "to" fund has been received. If so, the customer may proceed. If not, the customer is informed that a prospectus is required.

Once these steps have been performed, the system determines whether the "to" fund has a front-end load associated with it. If not, the process continues as shown in Fig. 20B. If a front-end load is applicable, the system determines whether the load on the "to" fund is greater than the load on the "from" fund. If not, the process continues as shown in Fig. 20B. If the load on the "to" fund is greater than the "from" fund, then the system determines whether the fund is priced hourly. The system then displays the net load or fees which are applicable based on the hourly-updated price or the last available price, and the customer is given the option of continuing.

As shown in Fig. 20B, the user is prompted to indicated whether to exchange by full redemption or by a dollar amount. If full redemption is indicated, the system determines whether the customer has previous open
5 orders or whether any restriction exists for the "from" fund. In either case, a message is displayed indicating that the transaction cannot proceed. If neither condition is met, then the system determines whether the requested transaction is the initial purchase for the
10 fund. If so, then the system determines what the customer wishes to do with dividends and capital gains earned; for example, whether to reinvest these amounts or to transfer to another account. The system also determines whether the customer has a full-service
15 account and, if so, whether the requested transaction was made after consultation. The process then continues as shown in Fig. 20C.

If the customer indicates a dollar amount for exchange, the system determines whether the amount is
20 more than the total amount held by the customer, whether the amount is less than a 90 percent (90%) total holdings limit, and whether the requested amount is within system parameters. For example, the system determines whether the requested amount exceeds a daily maximum or a daily
25 minimum and, if so, displays the applicable limits. If all such criteria are met, the process continues as shown in Fig. 20C.

In Fig. 20C, the system next determines whether any similar order has been made. If not, a recap of the
30 requested exchange is displayed to the customer and a confirmation is requested. If the customer cancels the transaction, the system confirms the cancellation and the customer may then return to another options menu. If confirmation is provided, the system determines whether
35 certain criteria are met. These include whether it is necessary to contact a consultant, whether confirmation

had not accurately been received, whether the system is unavailable at that time, and whether the brokerage system is down. If these criteria are met, the system indicates that the order has been placed.

5 If a similar order was discovered, the system calculates whether enough shares would be left over after the similar order had been placed. If not, the customer is informed of the possible insufficient funds and is given the option of returning to an earlier options menu.

10 If there are enough funds to cover both transactions, the customer is informed of each possible duplicate order. Once all possible duplicates have been reviewed, the customer may then proceed with the transaction upon providing an appropriate confirmation.

15 According to these processes, the method and system according to the second embodiment permits one to buy sell or exchange mutual funds. Moreover, the customer is informed of applicable fees and any promotional offers. As indicated, these transaction are performed in compliance with applicable regulatory provisions.

20 If the customer selects the "get information" option, as indicated in Fig. 16, the process continues as shown in Fig. 21. Upon selection of the "get
25 information" option, the customer may then select one of a "holdings" option, a "stock quotes" option, a "symbol directory" option, or an "activity and orders" option. The fourth option permits the customer to review previously made orders and account activity in a manner
30 similar to that described above with respect to the first embodiment of the invention. Selection of any of the first three options results in the following process.

 The system determines whether the customer has a linked-brokerage account. If not, the system indicates
35 that the selected option is not available and the customer is returned to a previous options menu. If the

customer does have a brokerage account, the system then determines which account the customer wishes to access. The system then displays a portfolio profile message and determines whether the broker system is available. The profile message is then displayed to the customer and the system determines whether the brokerage system is available. If the brokerage system is unavailable, the situation is indicated to the customer, who may then return to a previous options menu. The system then provides information relating to the customer's total holdings, including mutual funds and stocks, provides price quotations for both stocks and mutual funds, or consults a symbol look-up table for both stocks and mutual funds in accordance with the selection of the user. These processes correspond to those described above. For example, the brokerage system consults an outside quotation provider in order to determine the most current stock and mutual fund prices.

D. Detailed Description of System Elements (Figs. 14-15)

As mentioned above, it is a feature of the invention that preexisting systems can be reconfigured to support a combined brokerage and non-brokerage functions provided through an ATM. Accordingly, the following discussion describes by way of example, individual systems programmed in accordance with aforementioned processes. These systems together comprise one example of an integrated financial system according to the invention. Those skilled in the art will appreciate that a vast number of alternate embodiments are available without departing from the spirit or scope of the invention.

1. CAT

5

10

25

2. TPS/CPS

30

5

10

30

35

5

10

15

20

—

The system shown in Fig. 15 provides redundancy to ensure reliable processing. Specifically, the quotation/portfolio systems 132 and 134 comprise two RS/6000 systems connected to the TPS's 150 and 152. Only the primary system receives messages from the TPS's 150 and 152. The secondary system 134 remains in a standby state until it is detected that the primary system 132 has failed. Watchdog processes monitor the X.25 processes 148 and the query the servers 126 and 128.

Accordingly, several preferred embodiments have been set forth in fulfillment of the various objects of the inventions. Specifically, a system and a method have been described which providing brokerage functions through a preexisting ATM network. In particular, the present system and method permit consumer to conveniently buy and sell securities, obtain up-to-the-minute brokerage account valuation, and up-to-the-minute securities prices.

107045 004 27113 1

CLAIMS

WHAT IS CLAIMED IS:

1. A system for performing brokerage and other financial services comprising:

5 an ATM network comprising a plurality of data terminals having cash dispensing capabilities, said ATM network providing a plurality of financial services to customers through said data terminals including cash withdrawals from customer banking accounts and transfers
10 between customer accounts;

a brokerage system operatively connected to said ATM networks through said at least one host system, said brokerage system including:

means for maintaining records corresponding to
15 customer brokerage accounts;

means for obtaining securities price information upon a request made with said data terminals; and

means for buying and selling securities held on
20 behalf of customers upon a request made with said data terminals.

2. The system for performing brokerage and other financial services as set forth in claim 1 wherein said brokerage system further includes means for
25 evaluating current value of respective customer securities holdings based on said securities price information.

3. The system for performing brokerage and other financial services as set forth in claim 1 wherein
30 said securities price information is obtained substantially in real time.

4. The system for performing brokerage and other financial systems as set forth in claim 1 said securities include stocks, bonds, and mutual funds.

5. The system for performing brokerage and other financial systems as set forth in claim 1, further comprising means for cross referencing a security symbol with other information, including a security name, in response to a customer request.

6. In an integrated network including a plurality of ATMs, a host system for servicing said ATMs, and a brokerage system which maintains user brokerage accounts, a method for providing brokerage services to users with said ATMs comprising:

receiving identification data from a user through an ATM and verifying said identification data based on stored records, said step including verifying that said brokerage system maintains a brokerage account on behalf of the user;

providing the user with an option displayed with said ATM to conduct brokerage transactions or other financial transactions;

receiving selection data provided from a user through said ATM, said selection data indicating selection of a brokerage transaction option;

providing the user with an option displayed with said ATM to trade securities held in said brokerage account;

upon selection of said option to trade securities by the user, obtaining an order request from said user to trade a security held on behalf of the user and forwarding said order request for completion at an exchange at which said security is traded;

upon selection of said option to determine
5 current value of a plurality of securities, obtaining a
current value for a selected one of said plurality of
securities and displaying said current value to the
customer with said ATM; and

7. The method according to claim 6 wherein
15 said securities include stocks, bonds, and mutual funds.

20 9. The method according to claim 6 wherein
said current value is provided substantially in real
time.

11. The method according to claim 6 further includes the step of cross-referencing a security symbol with other information, including a security name, in response to a user request.

12. An integrated financial system comprising:
an automated teller machine for providing a
customer interface to the financial system, said
automated teller machine including processor means, input
5 means for receiving customer information from a customer,
display means for displaying information to the customer,
and a dispenser mechanism, wherein said processor means
receives said customer information and controls said
display and said dispensing mechanism;
10 first communication means for remote
transmission of first data from said automated teller
machine;
a front end processor system coupled to said
first communication means, said front end processor
15 system interpreting said first data from said automated
teller machine and providing second data to said
automated teller machine whereby said front end processor
system controls a plurality of customer interactive
processes implemented through said automated teller
20 machine processor means;
second communication means for transmission of
third data from said front end processor system; and
a brokerage system receiving said third data
from said front end processor system through said second
25 communications means and providing fourth data thereto,
wherein said brokerage system maintains a record
corresponding to a brokerage account, said record
including indicia of number and type of securities held
on behalf of the customer and wherein said brokerage
30 system receives trade orders from the customer through
said automated teller machine and said front end
processor system and places orders to implement said
orders.

13. An integrated financial system according
35 to claim 12 further comprising a quotation system for

providing securities price information substantially in real time to the customer through said brokerage system, said front end processor system and said automated teller machine.

5 14. An integrated financial system according
to claim 13 further comprising means to compute a current
value of securities held on behalf of a customer based on
said securities price information, wherein said current
value is displayed to the customer with said automated
10 teller machine upon request of the customer.

15. An integrated financial system according to claim 12 wherein said securities include stocks, bonds, and mutual funds.

16. An integrated financial system according
15 to claim 12 wherein said customer interactive processes
include dispensing cash to a customer with said automated
teller machine, displaying account balances with said
automated teller machine, and requesting transfers
between customer accounts.

20 17. An integrated financial system according
to claim 12 wherein said display means and said input
means comprise a touch screen display.

18. An integrated financial system according to claim 12 further comprising means for cross
referencing a security symbol with other information,
including a security name, in response to a customer
request.

A method and system for providing integrated financial services including brokerage services through an ATM network permits trading of securities, portfolio evaluation, security price evaluation, and brokerage account inquiries. The invention utilizes a familiar customer interface, a standard ATM or a customer activated terminal, to provide brokerage functions with a network conventionally used to perform traditional banking functions. The system and method according to the invention provides for trading of a wide variety of publicly traded security by linking the customer to a brokerage system. Provisions are further made for obtaining real time price quotations for up-to-the-minute portfolio evaluation and accurate buy and sell orders.

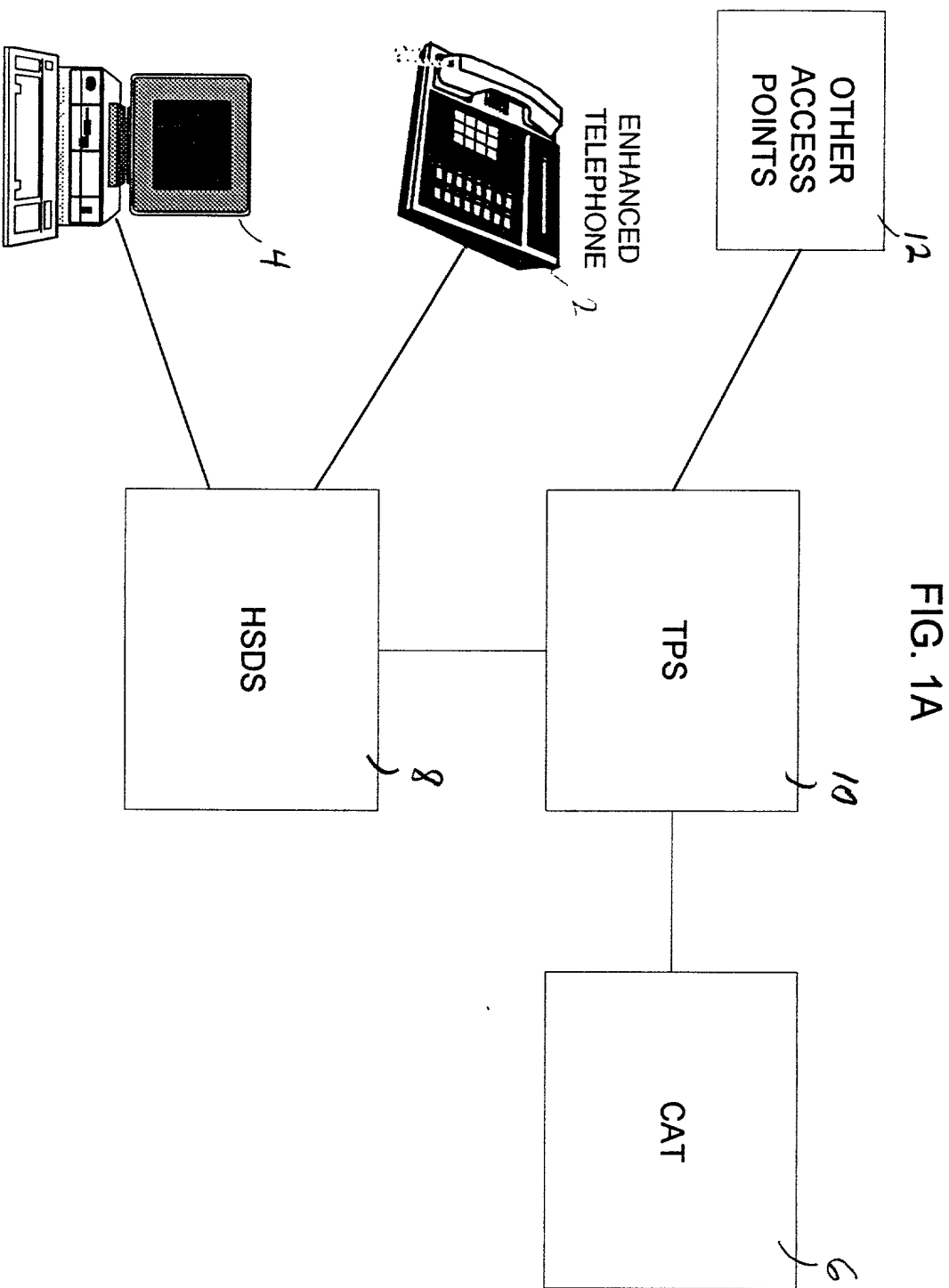


FIG. 1B

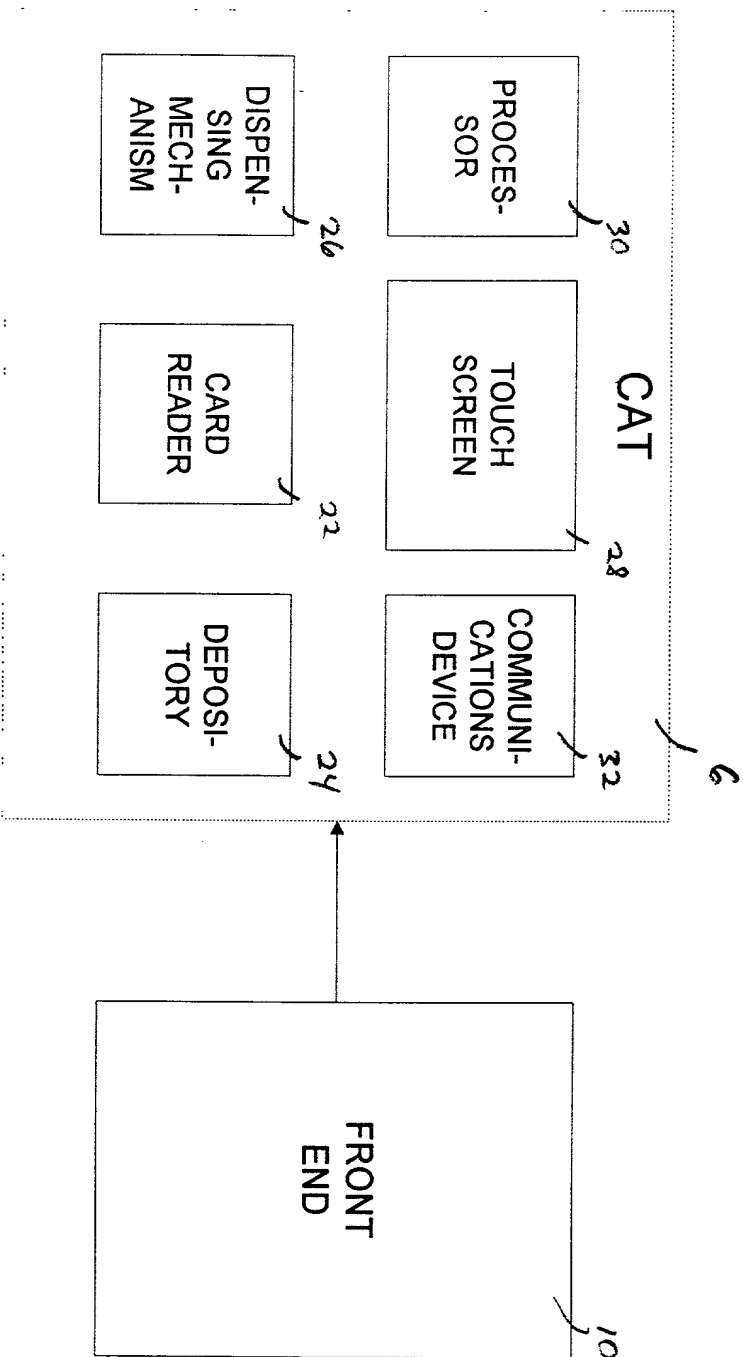


FIG. 2

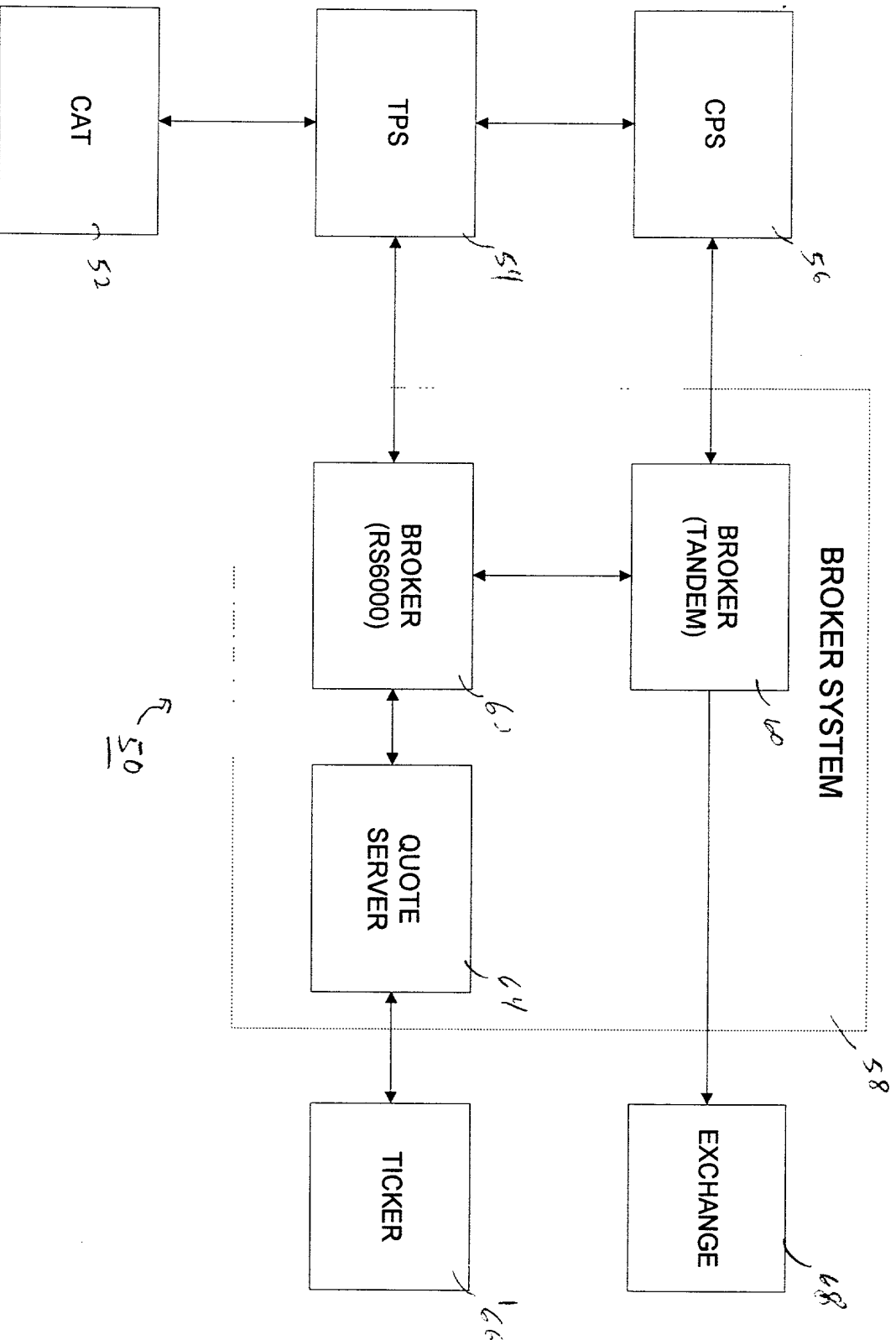
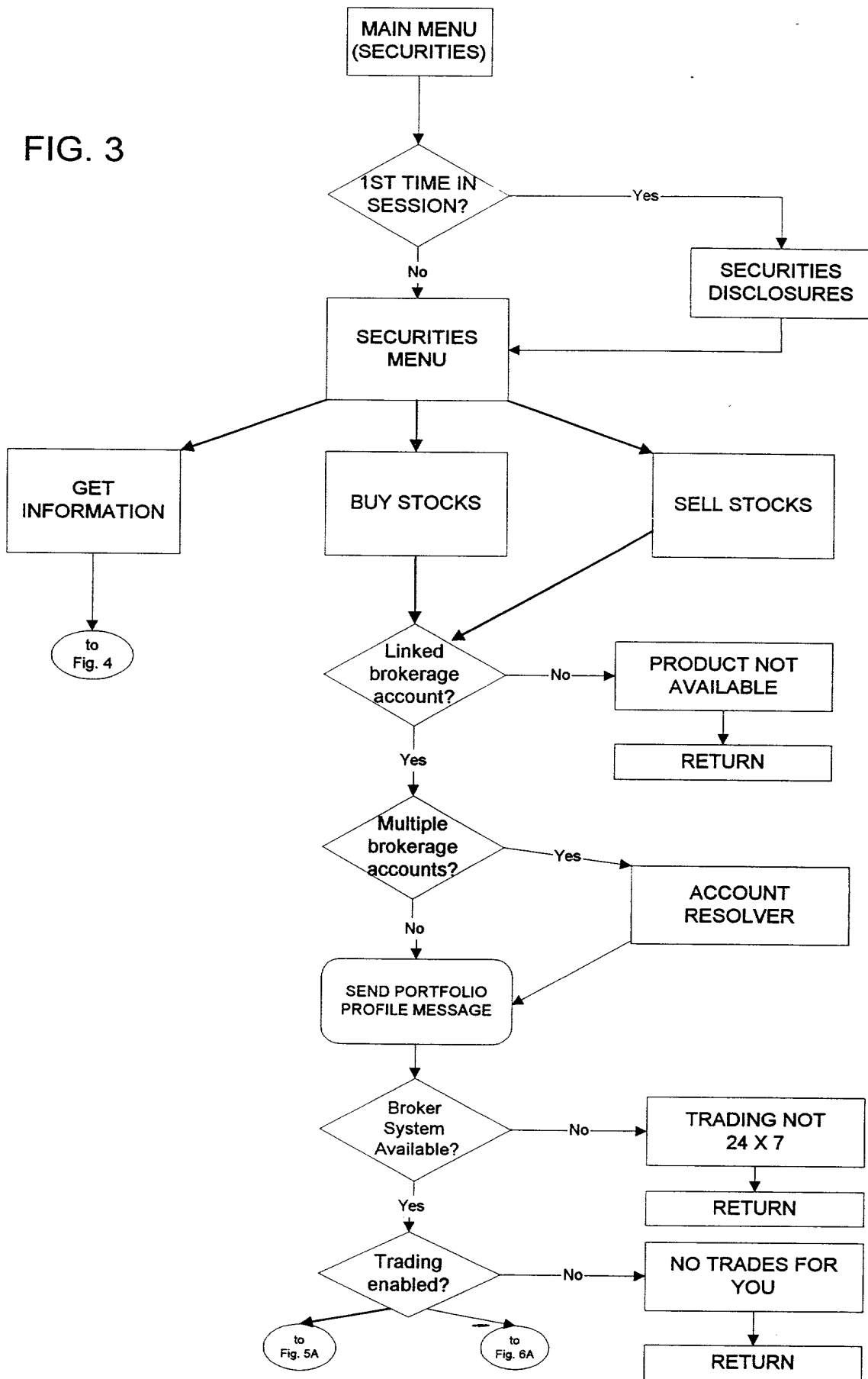
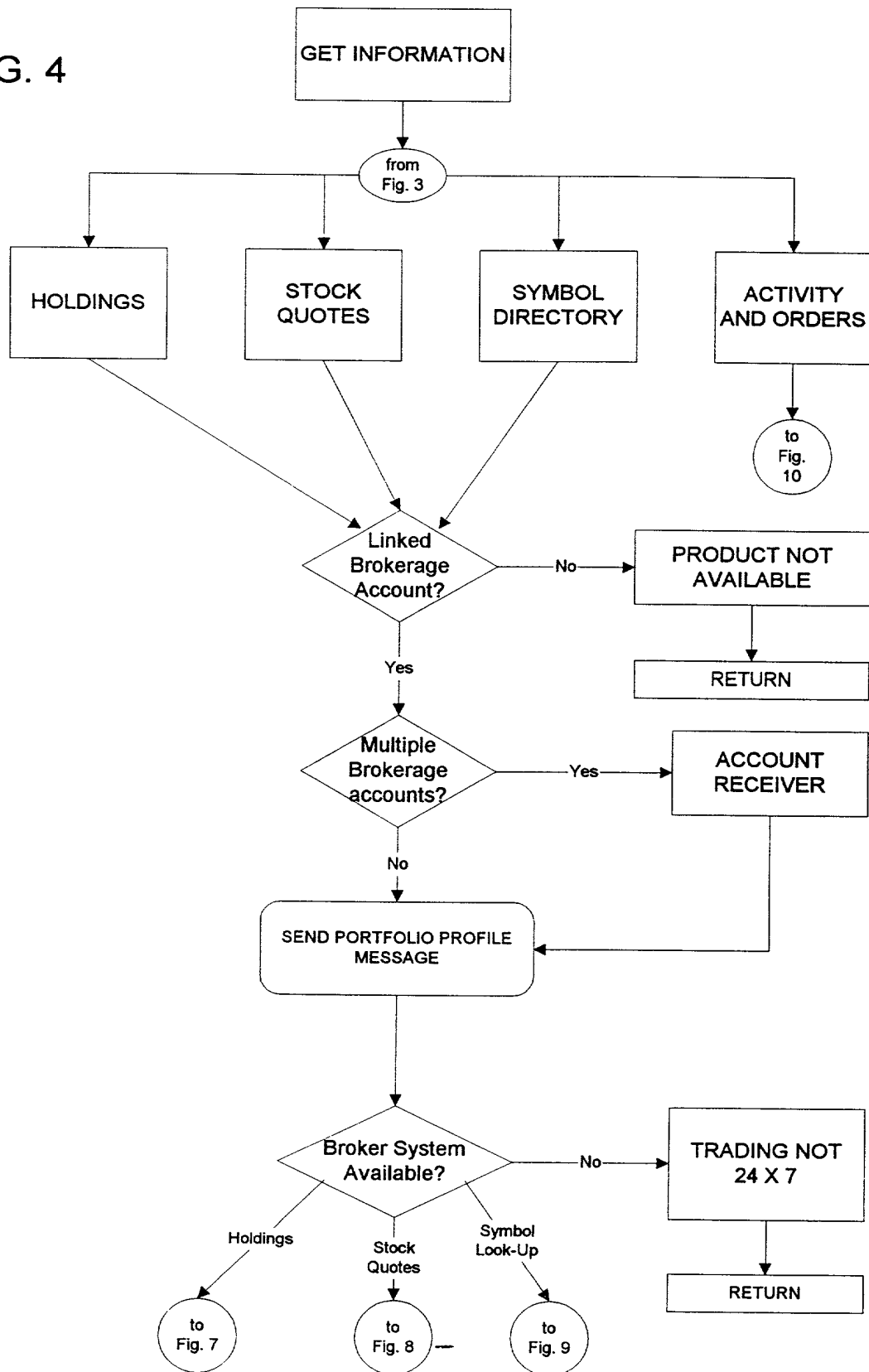


FIG. 3



00006839 01298
B52110 6E890060

FIG. 4



```

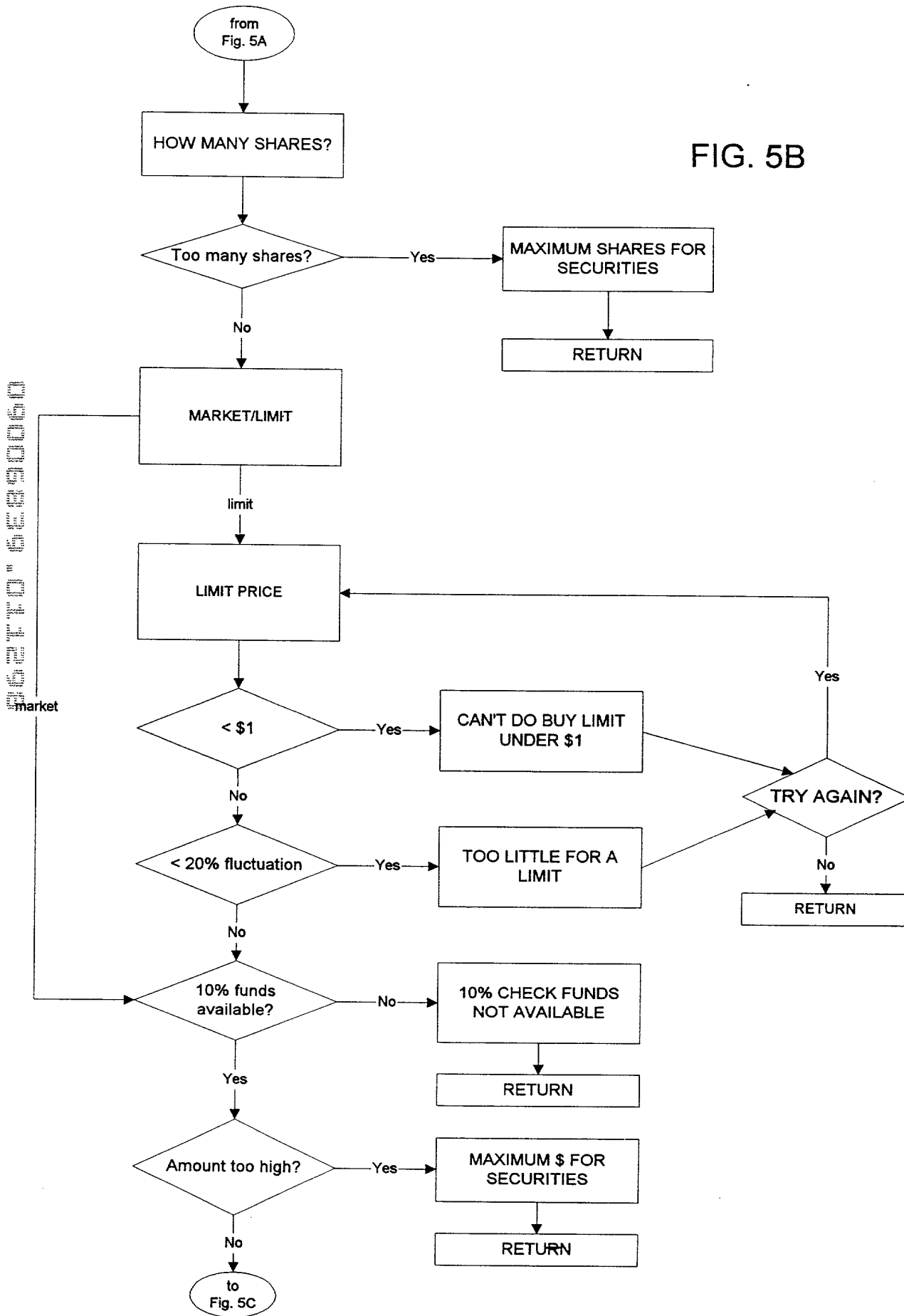
graph TD
    Start([ ]) --> BuyStocks[BUY STOCKS]
    BuyStocks --> FromFigs([from  
Figs. 2, 9])
    FromFigs --> WhichSymbol[WHICH SYMBOL TO BUY?]
    WhichSymbol --> SymbolEntered{Symbol entered?}
    SymbolEntered -- No --> WantDir{WANT SYMBOL  
DIRECTORY?}
    WantDir -- Yes --> ToFig9([to Fig. 9])
    WantDir -- No --> Return1[RETURN]
    SymbolEntered -- Yes --> SendQuote[SEND/GET REAL-TIME QUOTE]
    SendQuote --> IsLinkUp{Is Quotes  
link up?}
    IsLinkUp -- No --> CantDoThis[CAN'T DO THIS  
RIGHT NOW]
    CantDoThis --> Return2[RETURN]
    IsLinkUp -- Yes --> SymbolFound{Symbol  
Found?}
    SymbolFound -- No --> WantDir
    SymbolFound -- Yes --> Price1{Price < $1}
    Price1 -- Yes --> CantTradeUnder[CAN'T TRADE UNDER  
$1]
    Price1 -- No --> TradingSuspended{Trading Suspended?}
    TradingSuspended -- Yes --> TypeNotTradeable[TYPE NOT TRADEABLE  
HERE]
    TradingSuspended -- No --> TradedCAT{Traded  
at CAT?}
    TradedCAT -- No --> TradingSuspendedStock[TRADING SUSPENDED  
FOR THOSE STOCK]
    TradedCAT -- Yes --> SendSummary[SEND POSSIBLE  
DUPLICATE SUMMARY]
    SendSummary --> ToFig5B([to Fig. 5B])
    CantTradeUnder --> Return3[RETURN?]
    TypeNotTradeable --> Return3
    TradingSuspendedStock --> Return3
    Return3([RETURN?])

```

FIG. 5A

66210"6690060

FIG. 5B



Mean ΔT (°C)		Standard deviation		Significance	
Pre- ΔT	Post- ΔT	Pre- ΔT	Post- ΔT	Pre- ΔT	Post- ΔT
1.0	1.0	0.5	0.5	0.05	0.05
1.5	1.5	0.5	0.5	0.05	0.05
2.0	2.0	0.5	0.5	0.05	0.05
2.5	2.5	0.5	0.5	0.05	0.05
3.0	3.0	0.5	0.5	0.05	0.05
3.5	3.5	0.5	0.5	0.05	0.05
4.0	4.0	0.5	0.5	0.05	0.05
4.5	4.5	0.5	0.5	0.05	0.05
5.0	5.0	0.5	0.5	0.05	0.05
5.5	5.5	0.5	0.5	0.05	0.05
6.0	6.0	0.5	0.5	0.05	0.05
6.5	6.5	0.5	0.5	0.05	0.05
7.0	7.0	0.5	0.5	0.05	0.05
7.5	7.5	0.5	0.5	0.05	0.05
8.0	8.0	0.5	0.5	0.05	0.05
8.5	8.5	0.5	0.5	0.05	0.05
9.0	9.0	0.5	0.5	0.05	0.05
9.5	9.5	0.5	0.5	0.05	0.05
10.0	10.0	0.5	0.5	0.05	0.05
10.5	10.5	0.5	0.5	0.05	0.05
11.0	11.0	0.5	0.5	0.05	0.05
11.5	11.5	0.5	0.5	0.05	0.05
12.0	12.0	0.5	0.5	0.05	0.05
12.5	12.5	0.5	0.5	0.05	0.05
13.0	13.0	0.5	0.5	0.05	0.05
13.5	13.5	0.5	0.5	0.05	0.05
14.0	14.0	0.5	0.5	0.05	0.05
14.5	14.5	0.5	0.5	0.05	0.05
15.0	15.0	0.5	0.5	0.05	0.05
15.5	15.5	0.5	0.5	0.05	0.05
16.0	16.0	0.5	0.5	0.05	0.05
16.5	16.5	0.5	0.5	0.05	0.05
17.0	17.0	0.5	0.5	0.05	0.05
17.5	17.5	0.5	0.5	0.05	0.05
18.0	18.0	0.5	0.5	0.05	0.05
18.5	18.5	0.5	0.5	0.05	0.05
19.0	19.0	0.5	0.5	0.05	0.05
19.5	19.5	0.5	0.5	0.05	0.05
20.0	20.0	0.5	0.5	0.05	0.05
20.5	20.5	0.5	0.5	0.05	0.05
21.0	21.0	0.5	0.5	0.05	0.05
21.5	21.5	0.5	0.5	0.05	0.05
22.0	22.0	0.5	0.5	0.05	0.05
22.5	22.5	0.5	0.5	0.05	0.05
23.0	23.0	0.5	0.5	0.05	0.05
23.5	23.5	0.5	0.5	0.05	0.05
24.0	24.0	0.5	0.5	0.05	0.05
24.5	24.5	0.5	0.5	0.05	0.05
25.0	25.0	0.5	0.5	0.05	0.05
25.5	25.5	0.5	0.5	0.05	0.05
26.0	26.0	0.5	0.5	0.05	0.05
26.5	26.5	0.5	0.5	0.05	0.05
27.0	27.0	0.5	0.5	0.05	0.05
27.5	27.5	0.5	0.5	0.05	0.05
28.0	28.0	0.5	0.5	0.05	0.05
28.5	28.5	0.5	0.5	0.05	0.05
29.0	29.0	0.5	0.5	0.05	0.05
29.5	29.5	0.5	0.5	0.05	0.05
30.0	30.0	0.5	0.5	0.05	0.05
30.5	30.5	0.5	0.5	0.05	0.05
31.0	31.0	0.5	0.5	0.05	0.05

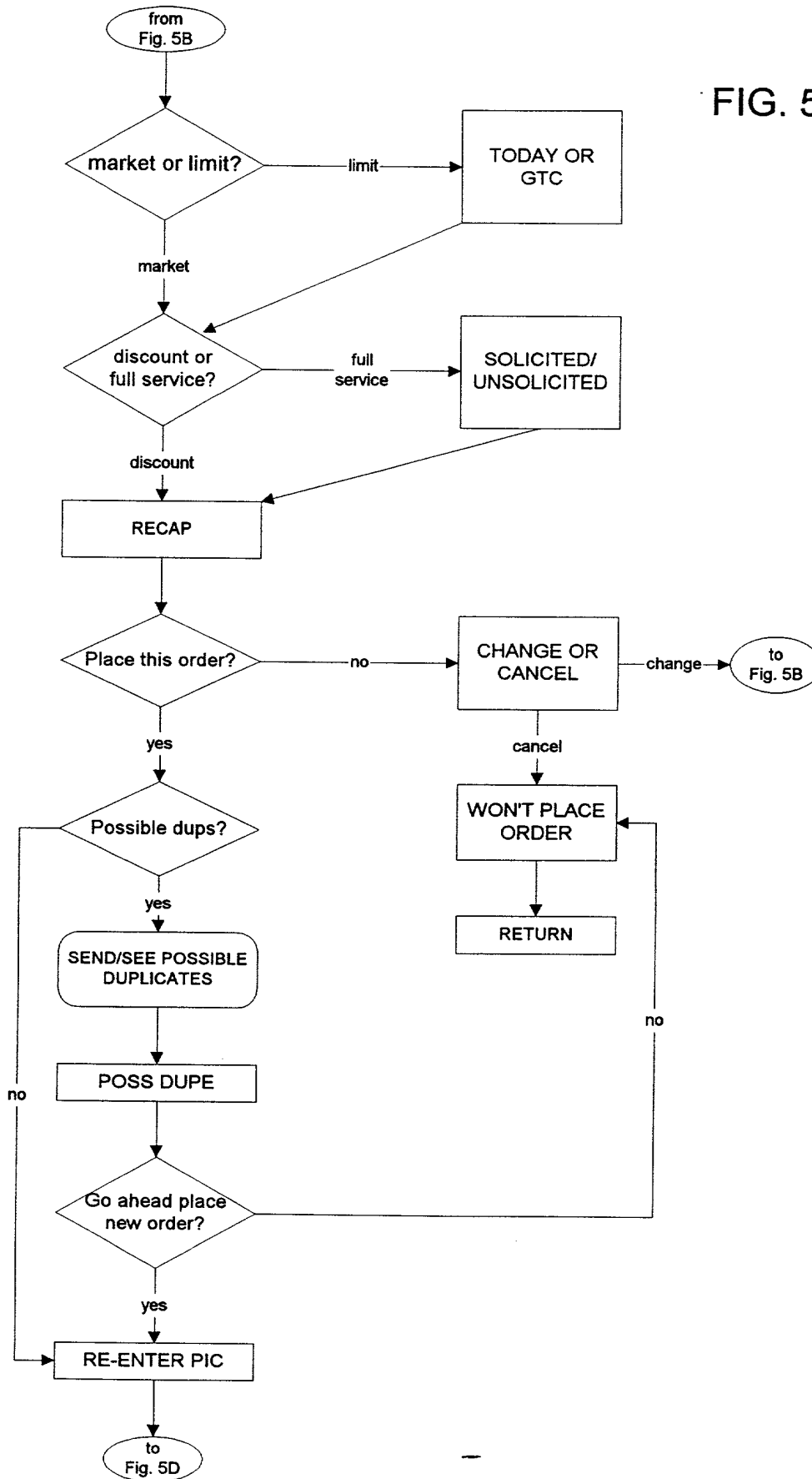
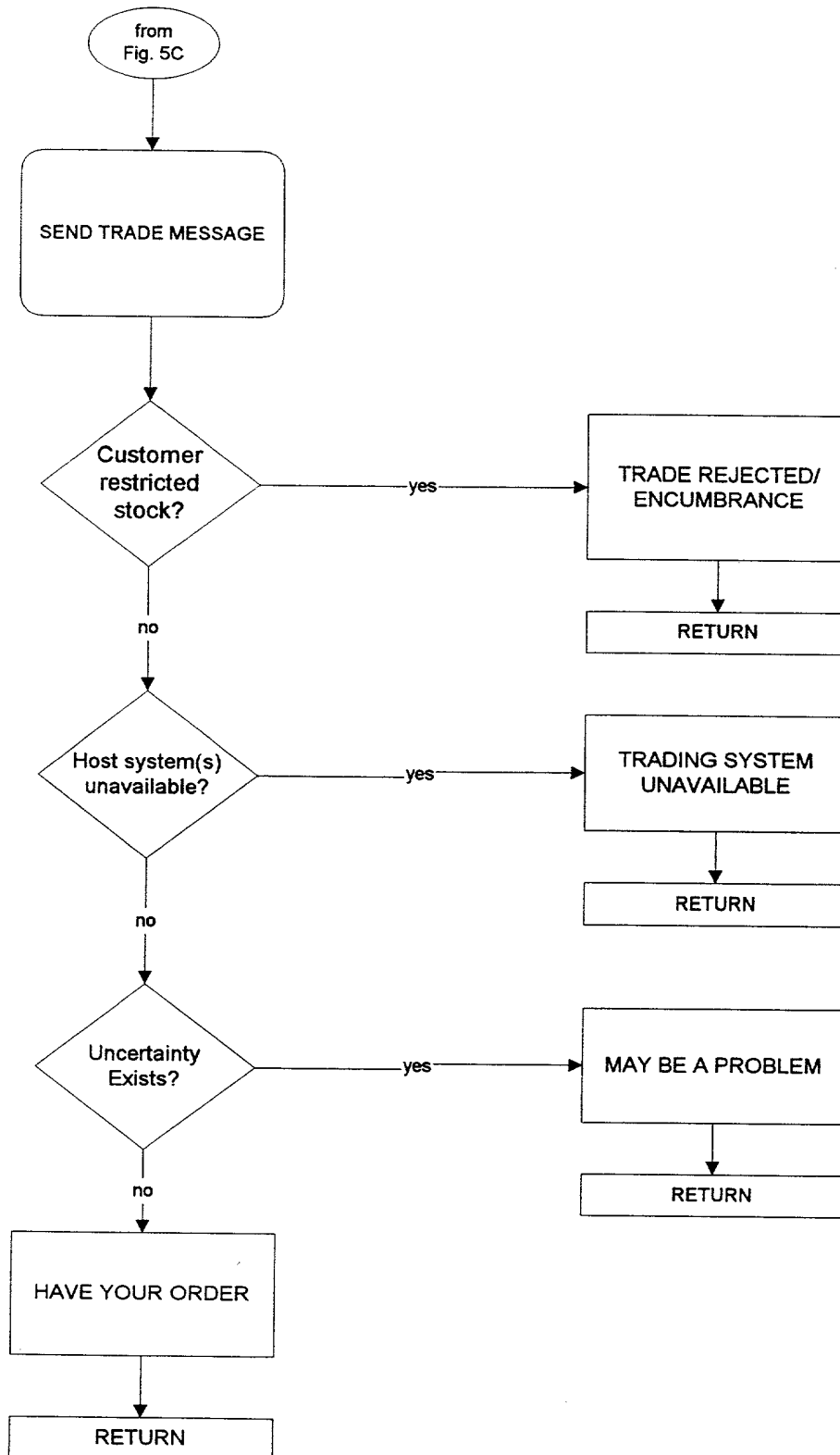


FIG. 5C

09006839 01293
66210 689060

FIG. 5D



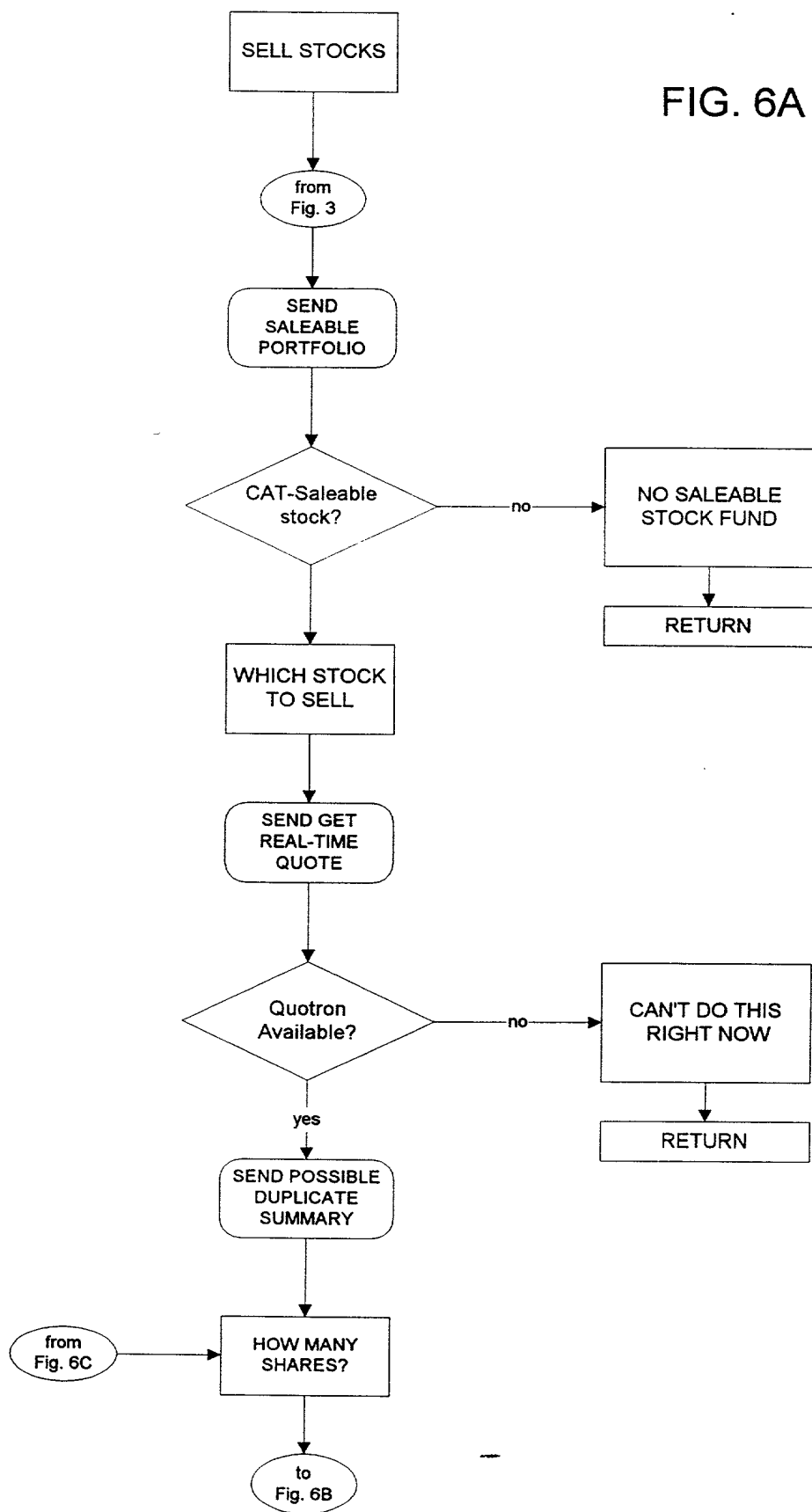


FIG. 6B

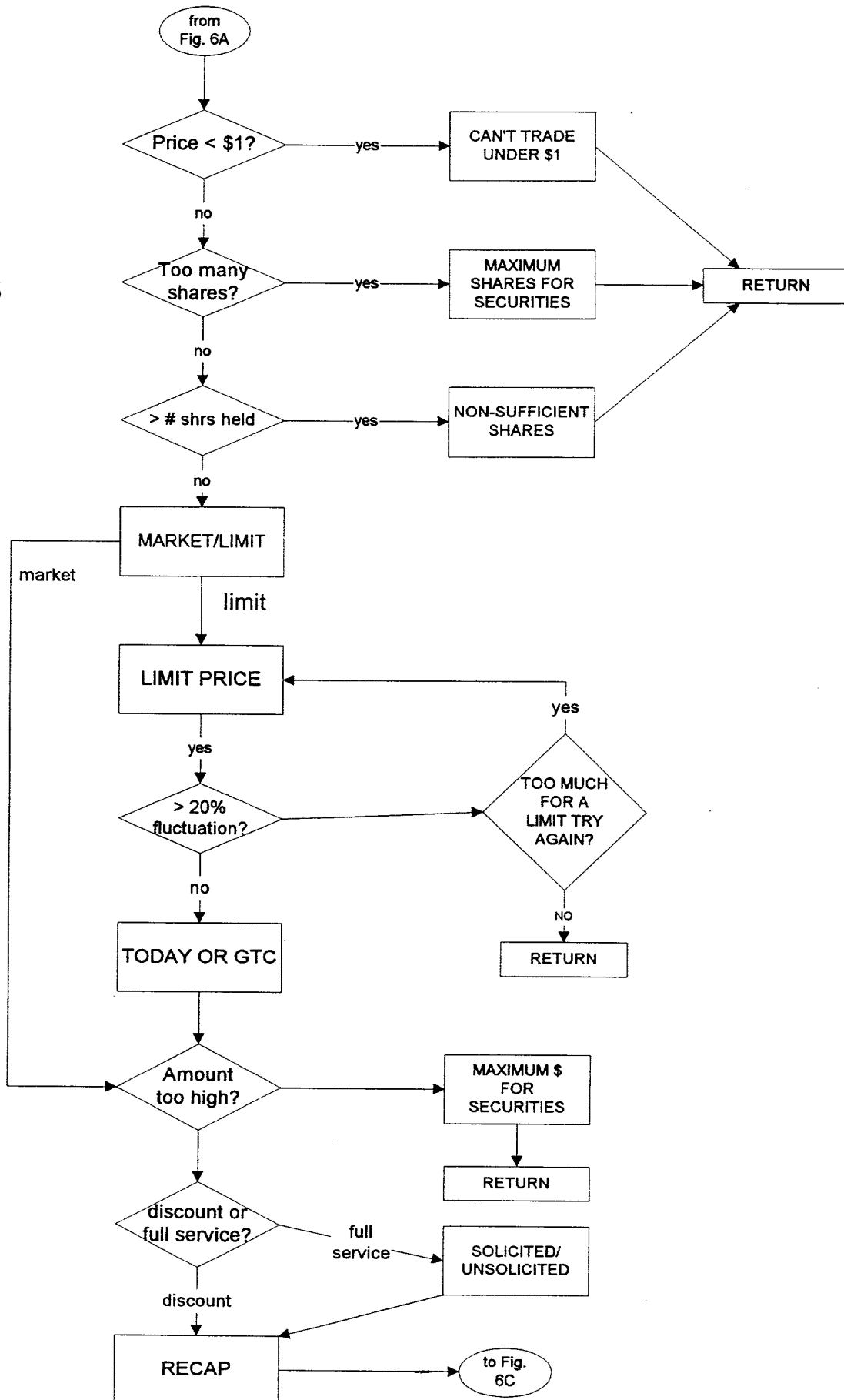


FIG. 6C

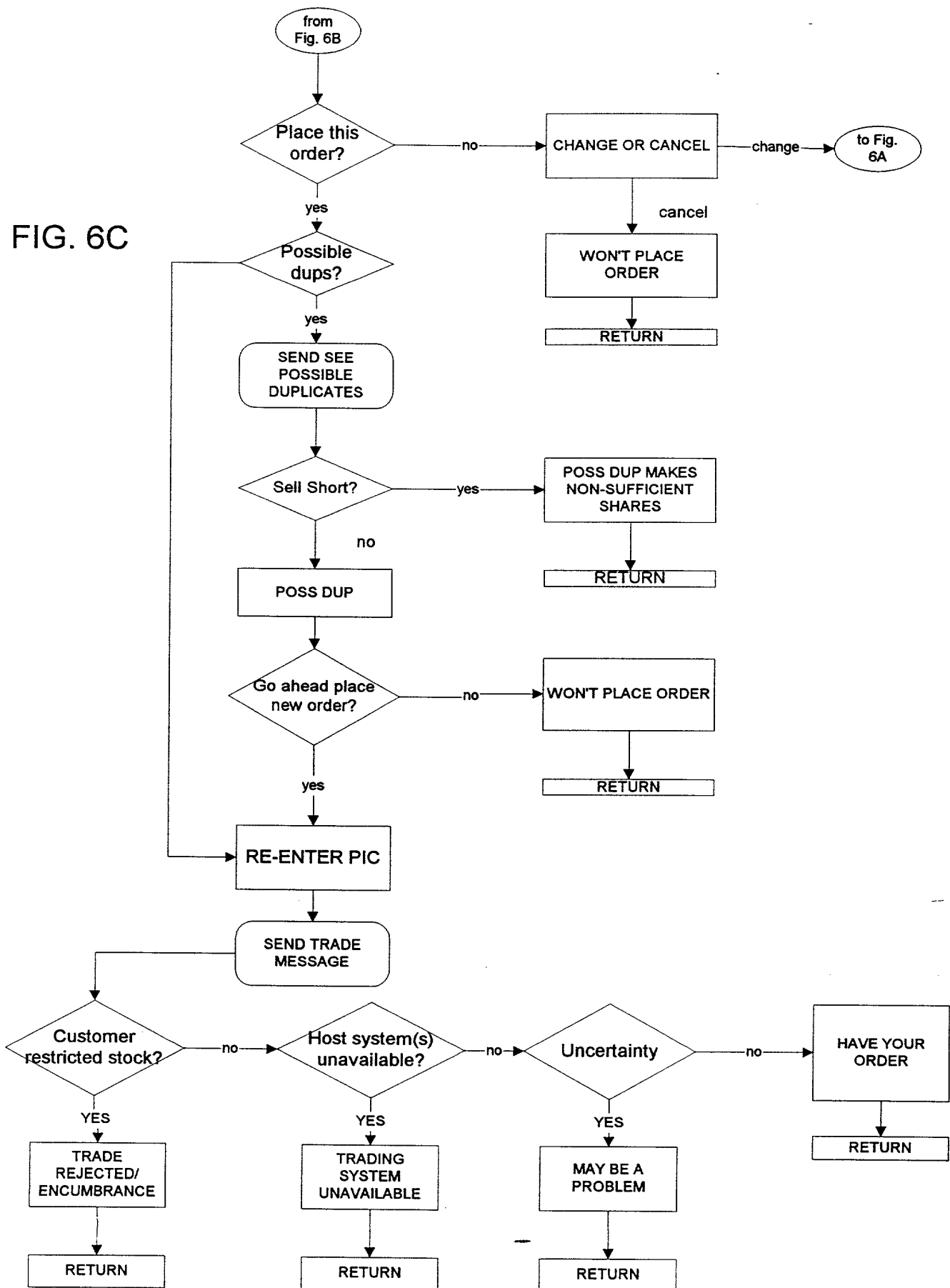
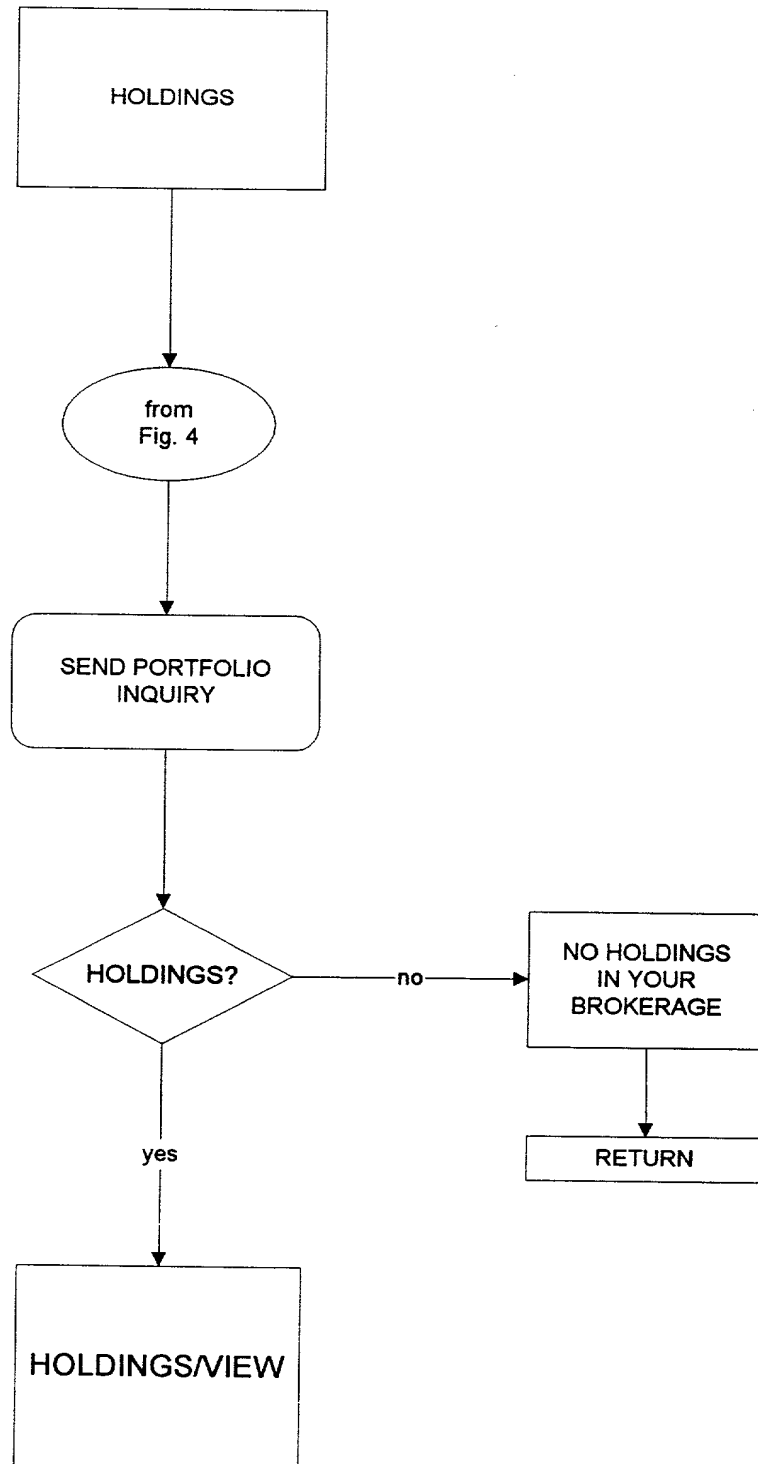


FIG. 7



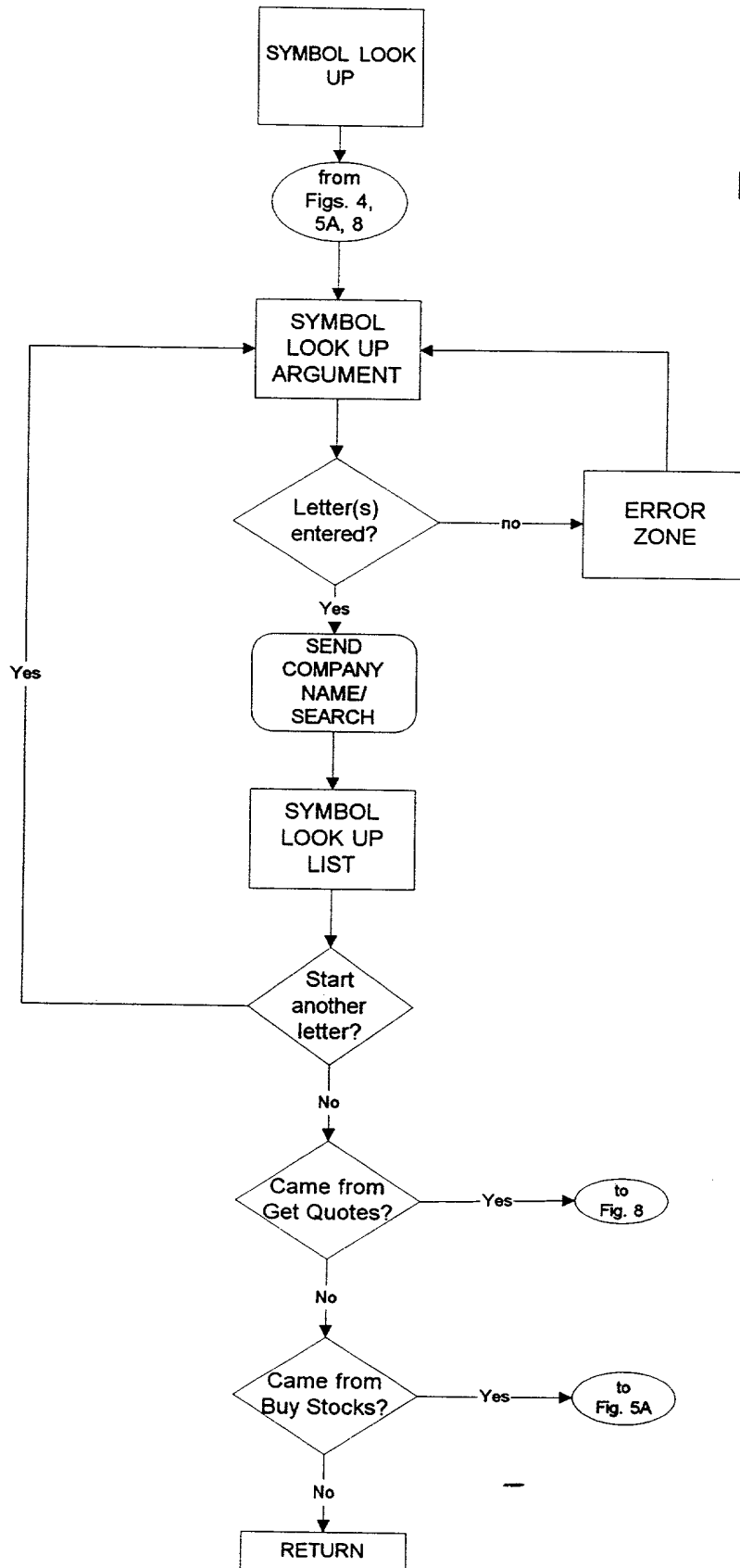
[illegible]

FIG. 9

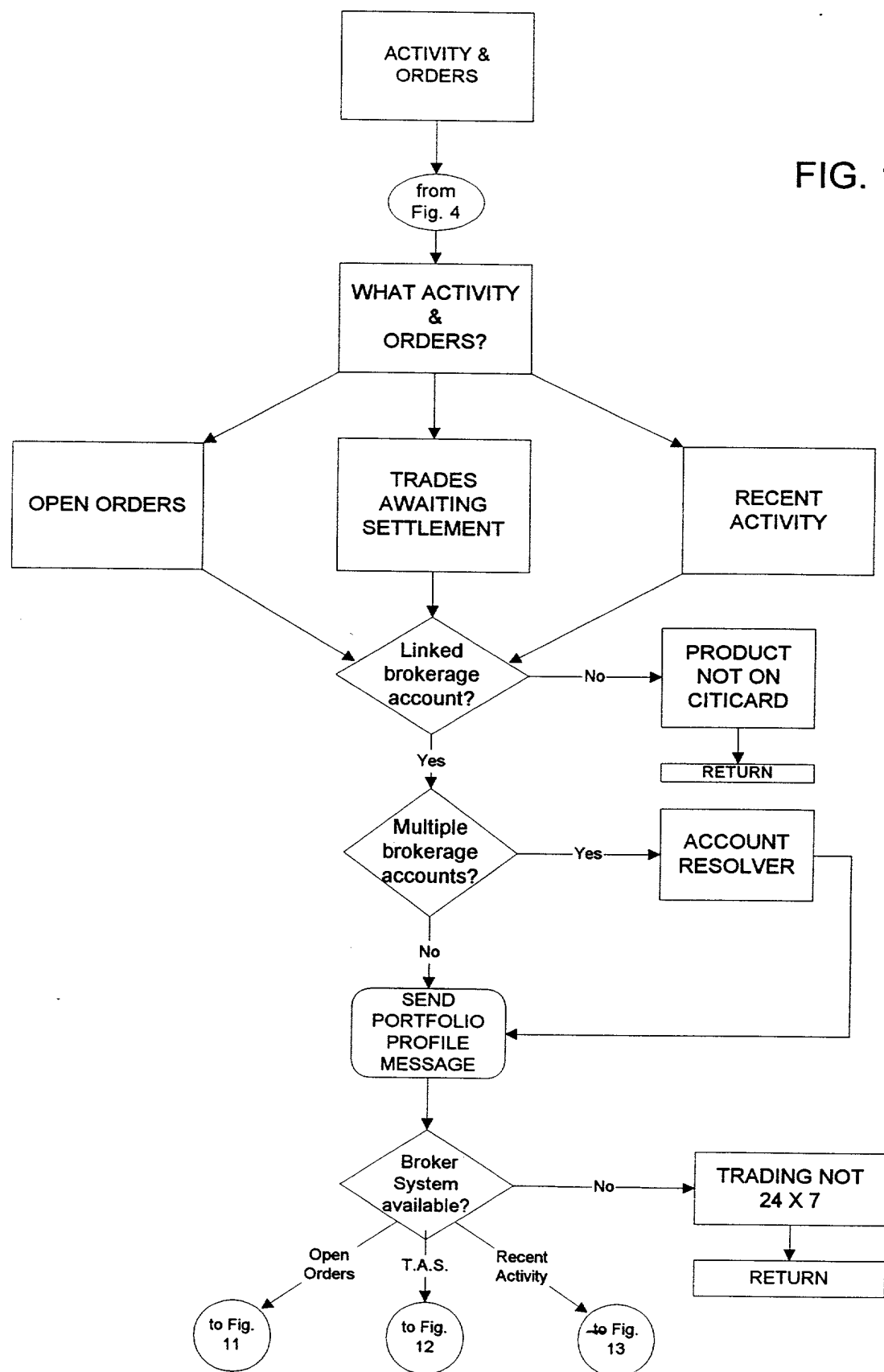


FIG. 11

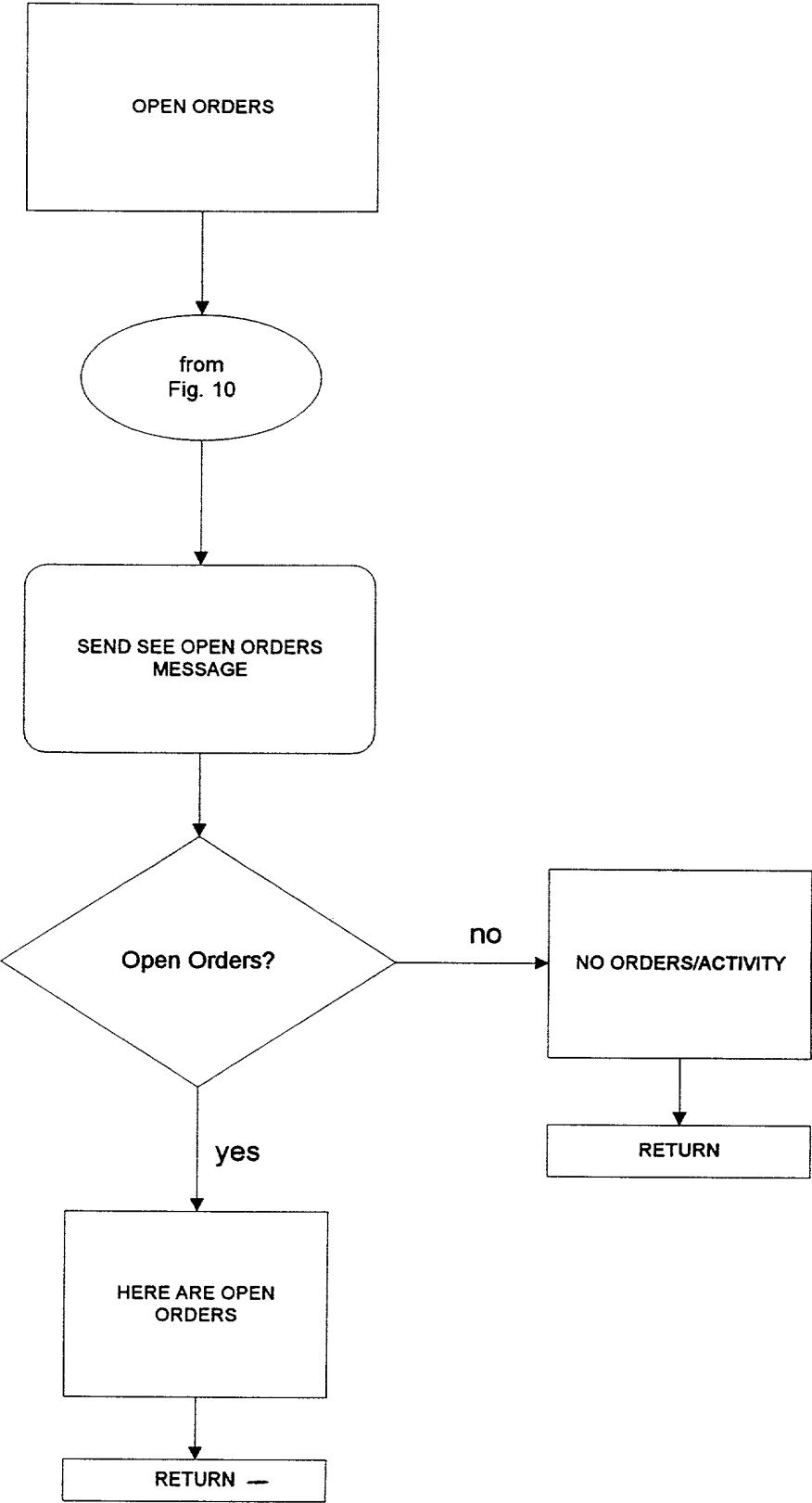


FIG. 12

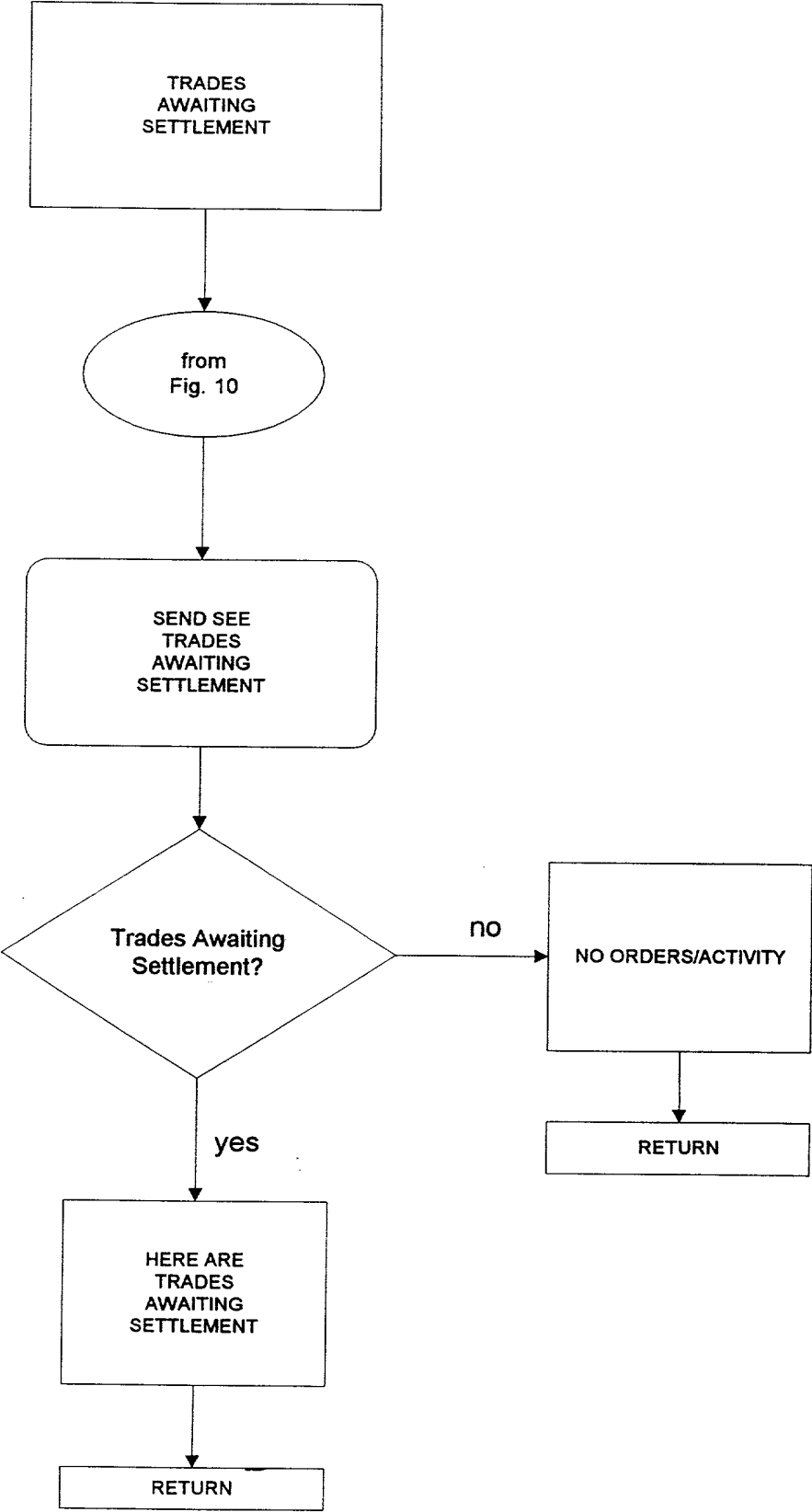




FIG. 14

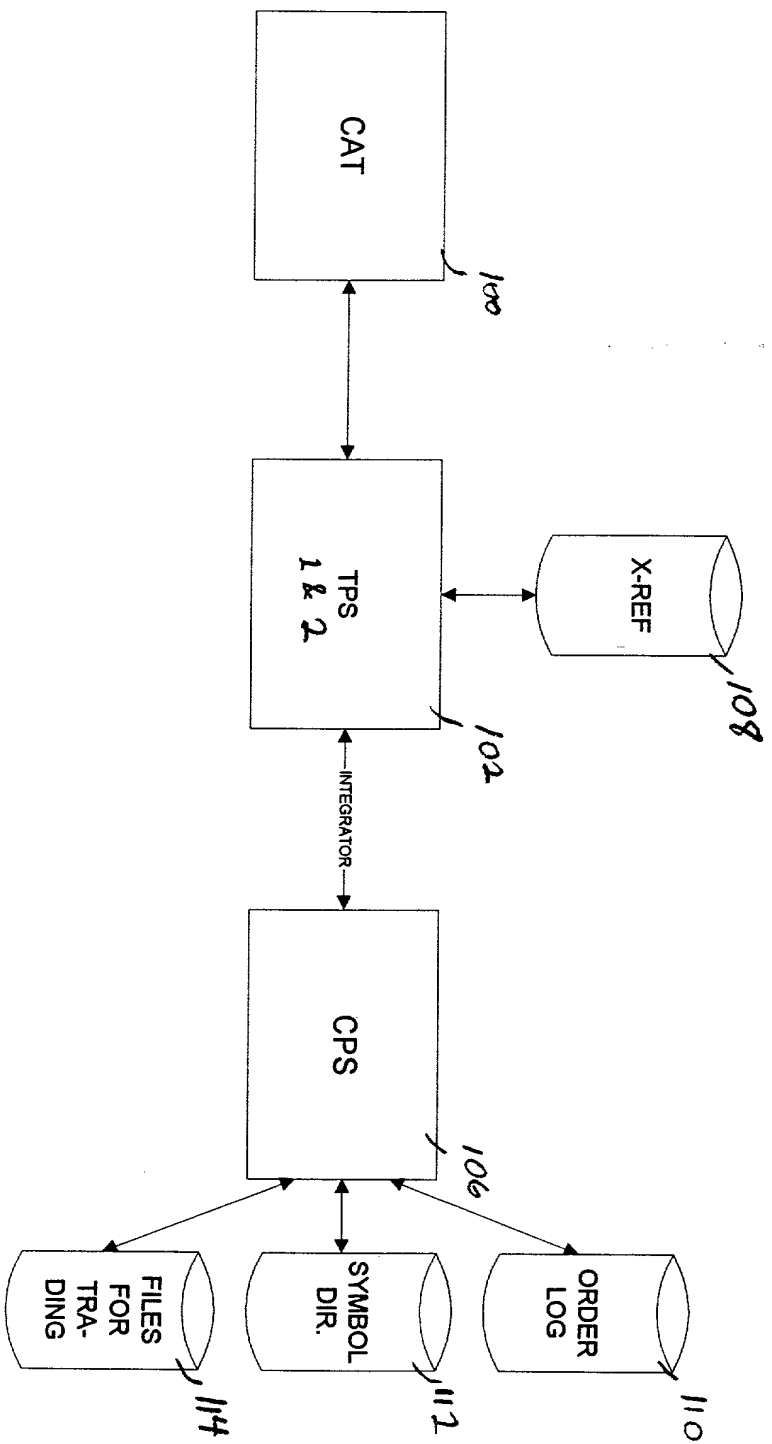


FIG. 15

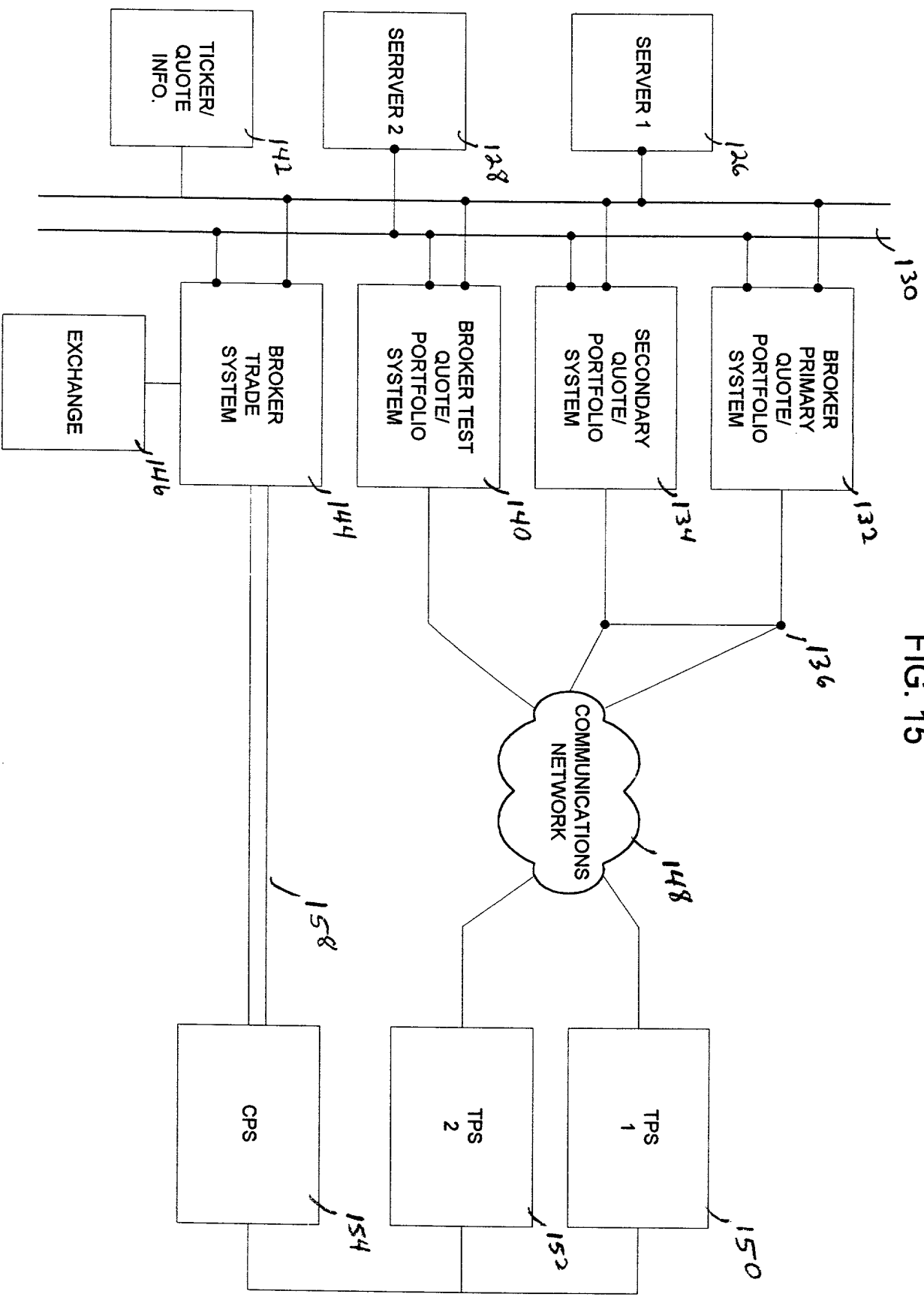


FIG. 16

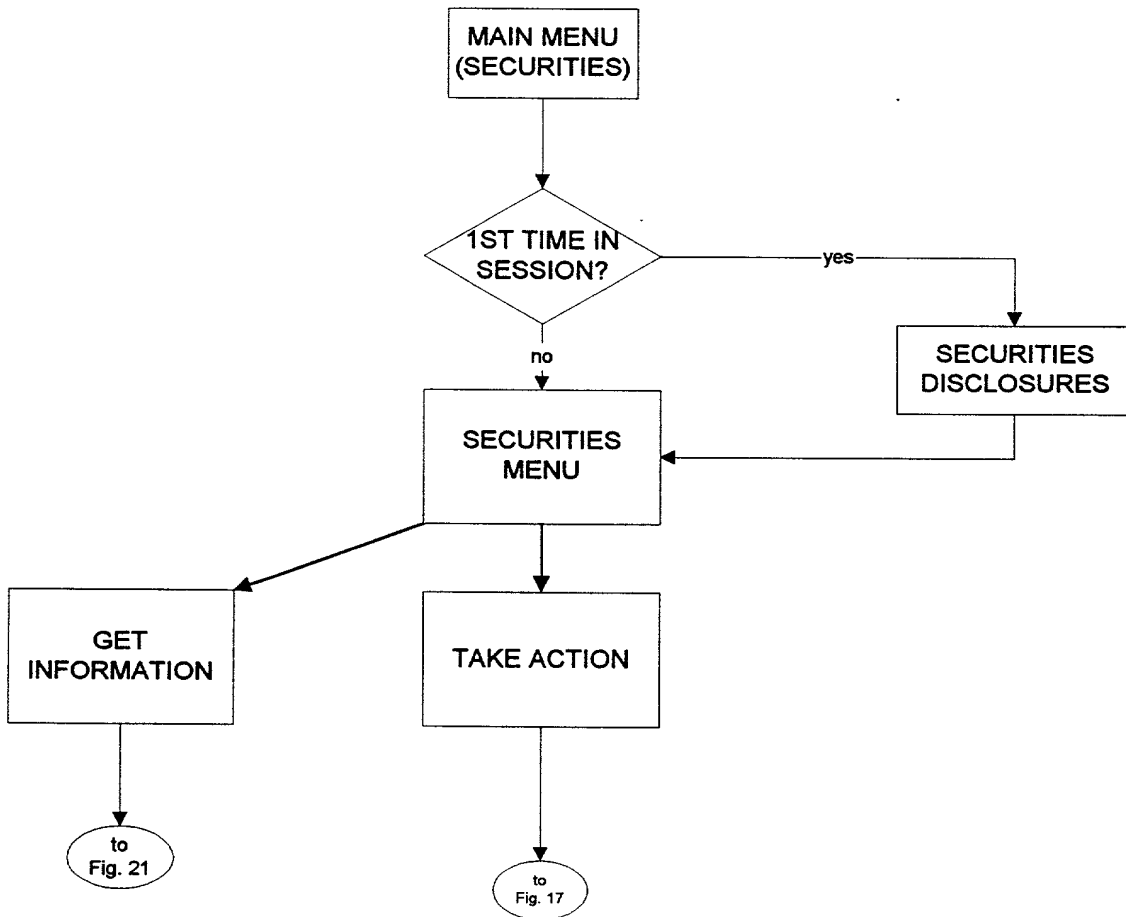
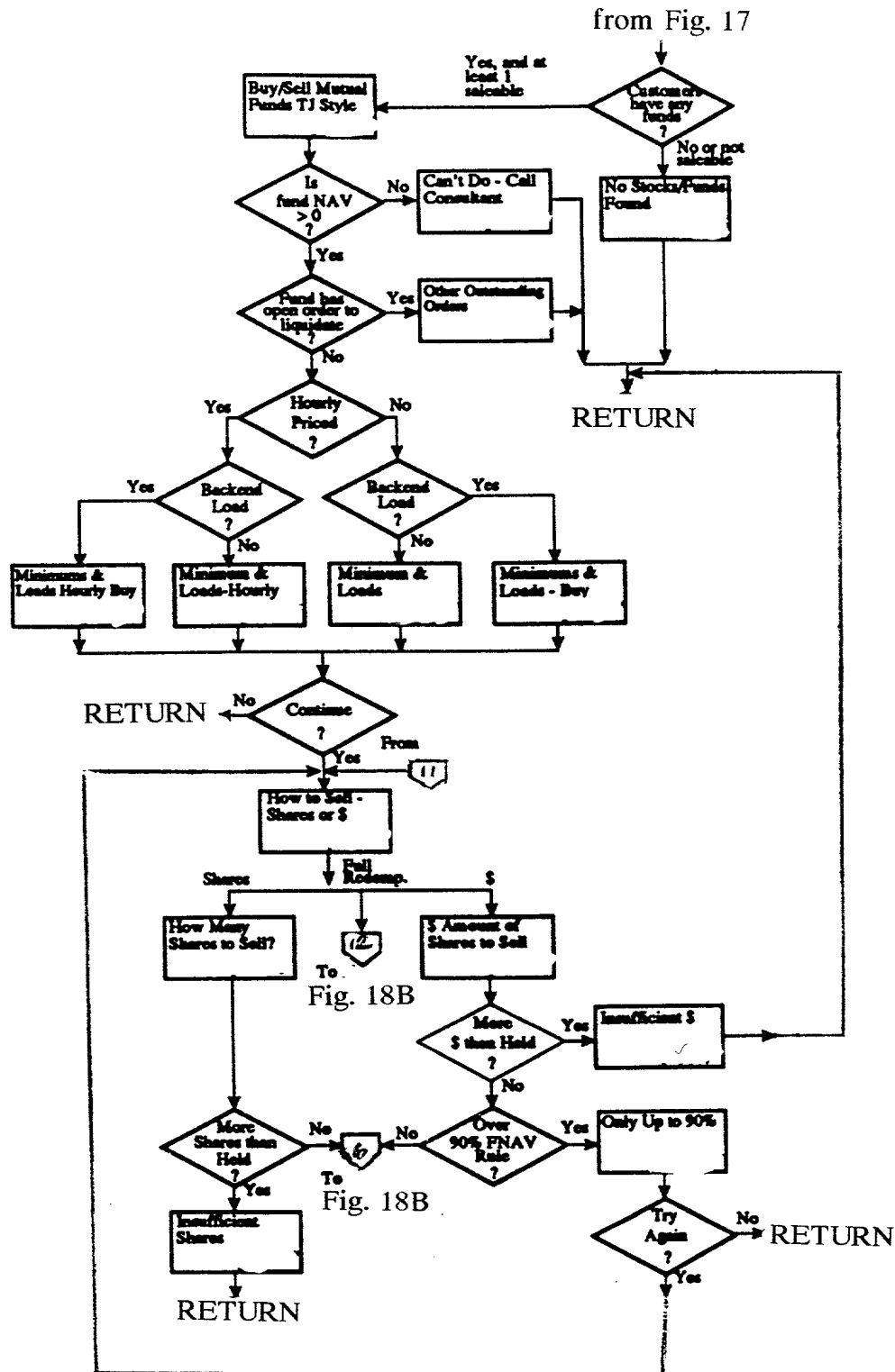
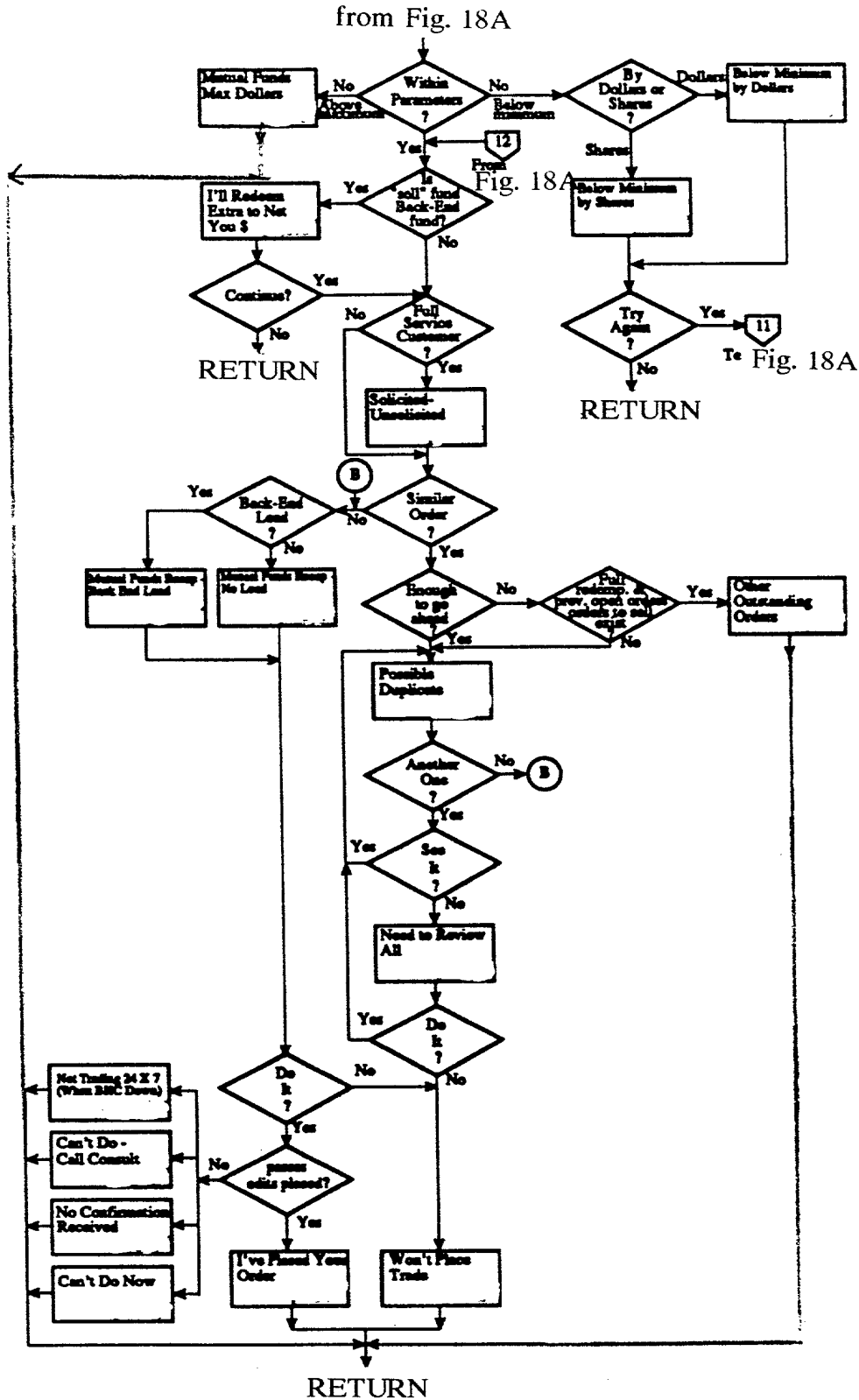


FIG. 18A

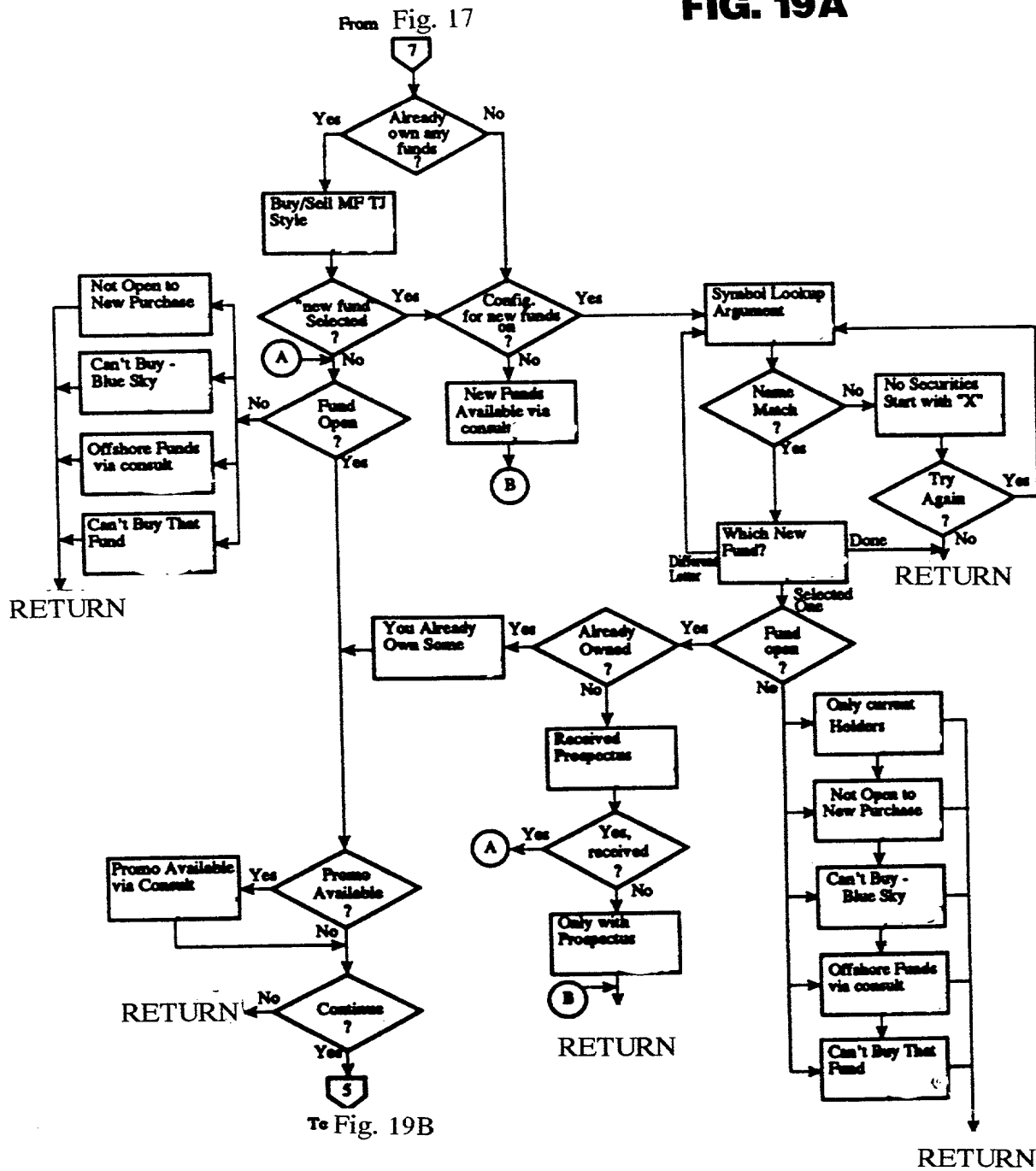


00006239 011298

FIG. 18B



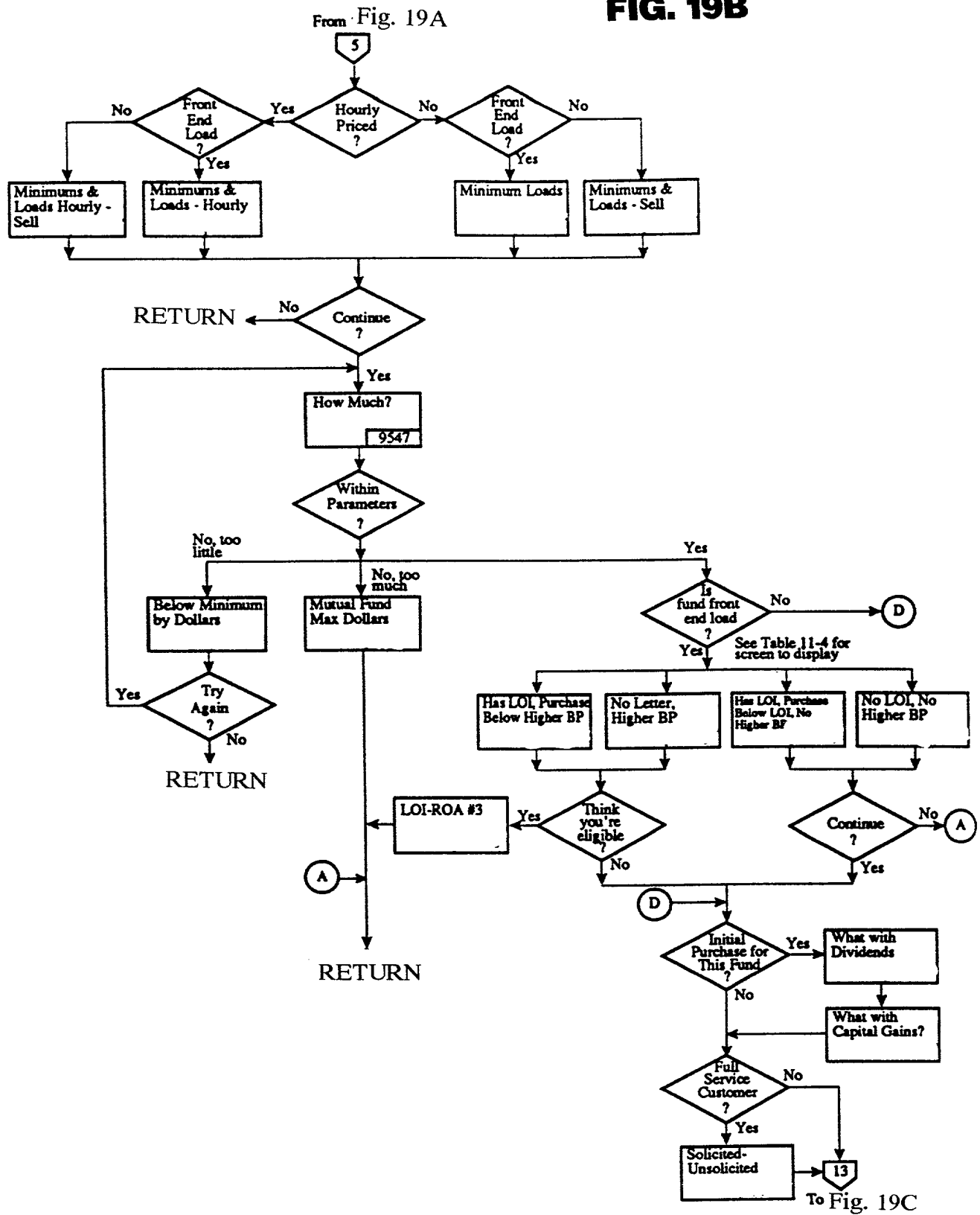
2025 RELEASE UNDER E.O. 14176

FIG. 19A

a) Biological data	
Age (years)	20.0 ± 0.1
Sex (male/female)	10/10
Height (cm)	170.0 ± 0.5
Weight (kg)	65.0 ± 1.0
Body mass index (kg m ⁻²)	22.0 ± 0.2
b) Cognitive	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
c) Strength and fitness	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
d) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
e) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
f) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
g) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
h) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
i) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
j) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
k) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
l) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
m) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
n) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
o) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
p) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
q) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
r) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
s) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
t) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
u) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
v) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
w) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
x) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5
Weight	65.0 ± 1.0
Body mass index	22.0 ± 0.2
y) Anthropometric data	
Age	20.0 ± 0.1
Sex	10/10
Height	170.0 ± 0.5

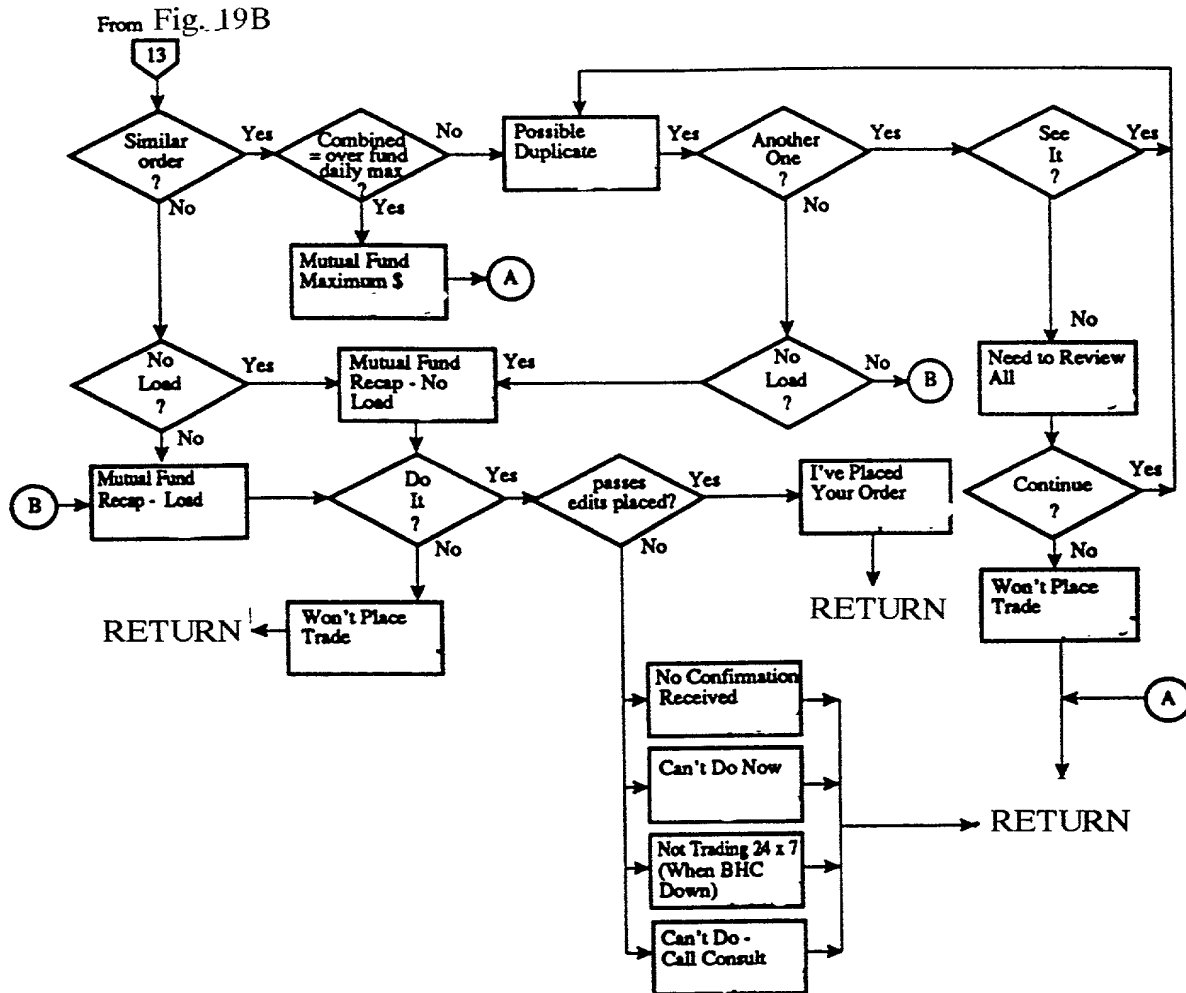
RETURN

FIG. 19B



2025 RELEASE UNDER E.O. 14176

FIG. 19C



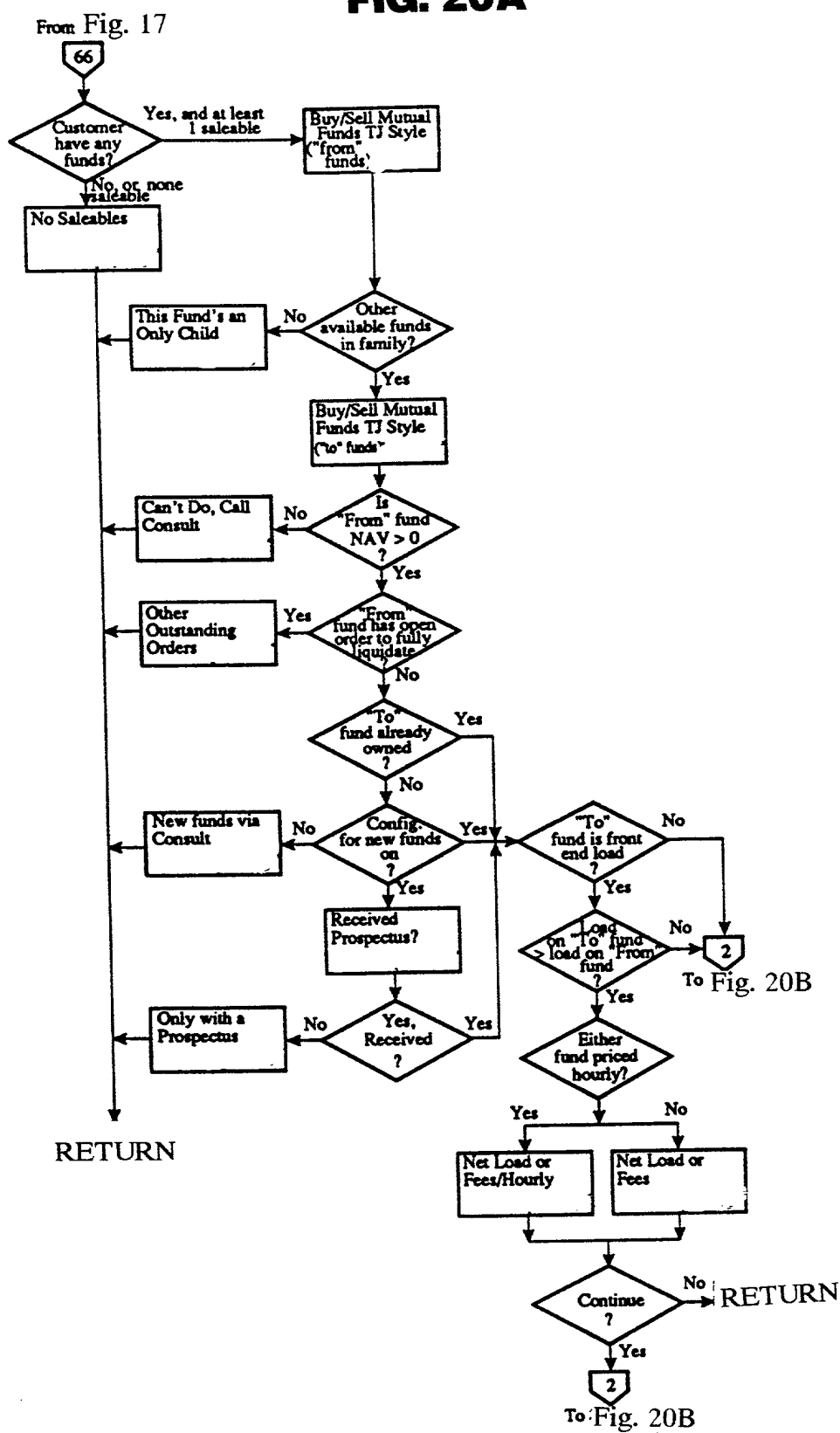
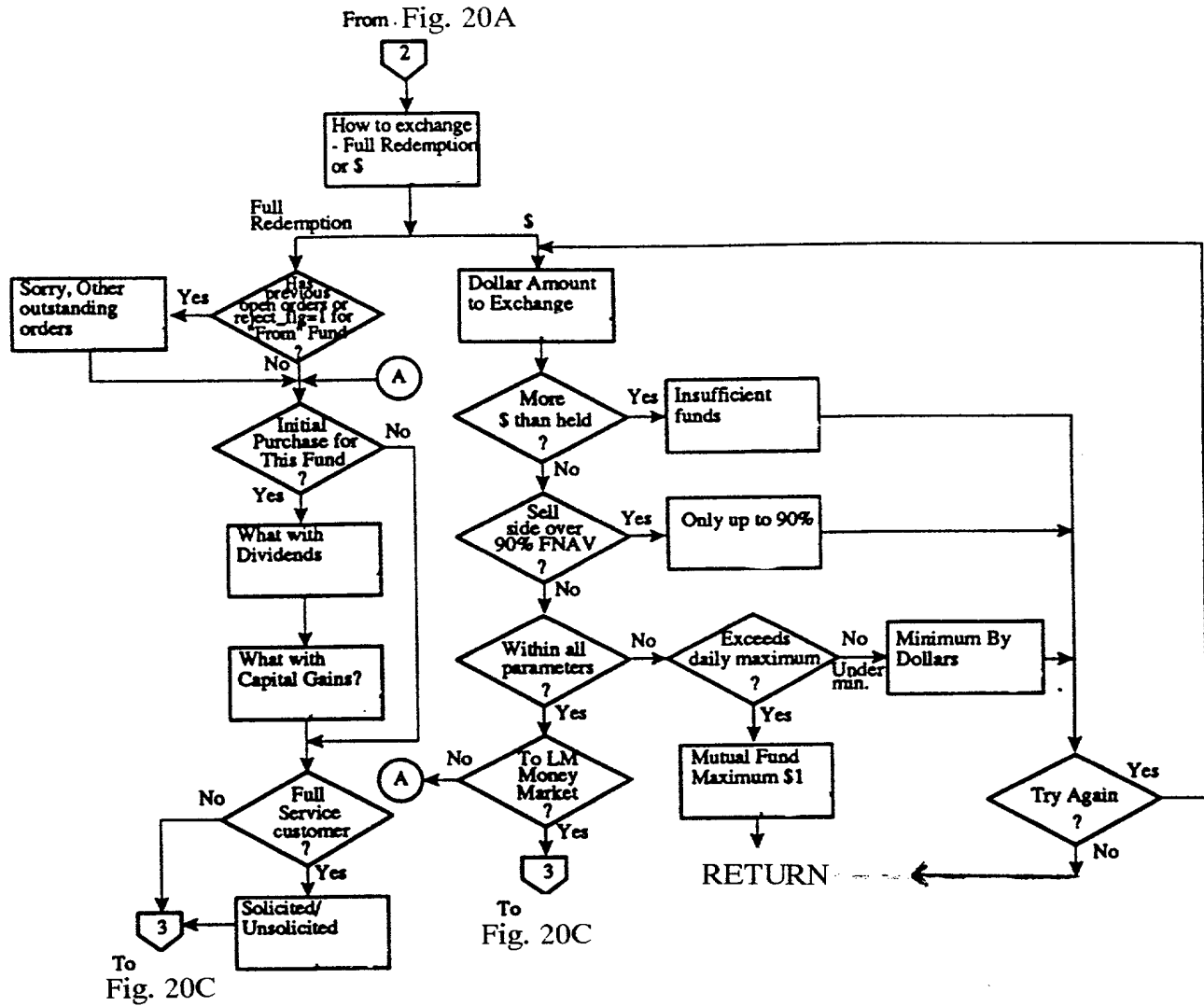
[illegible]

FIG. 20B



09006839 011298

FIG. 20C

From Fig. 20B

0500639 011298

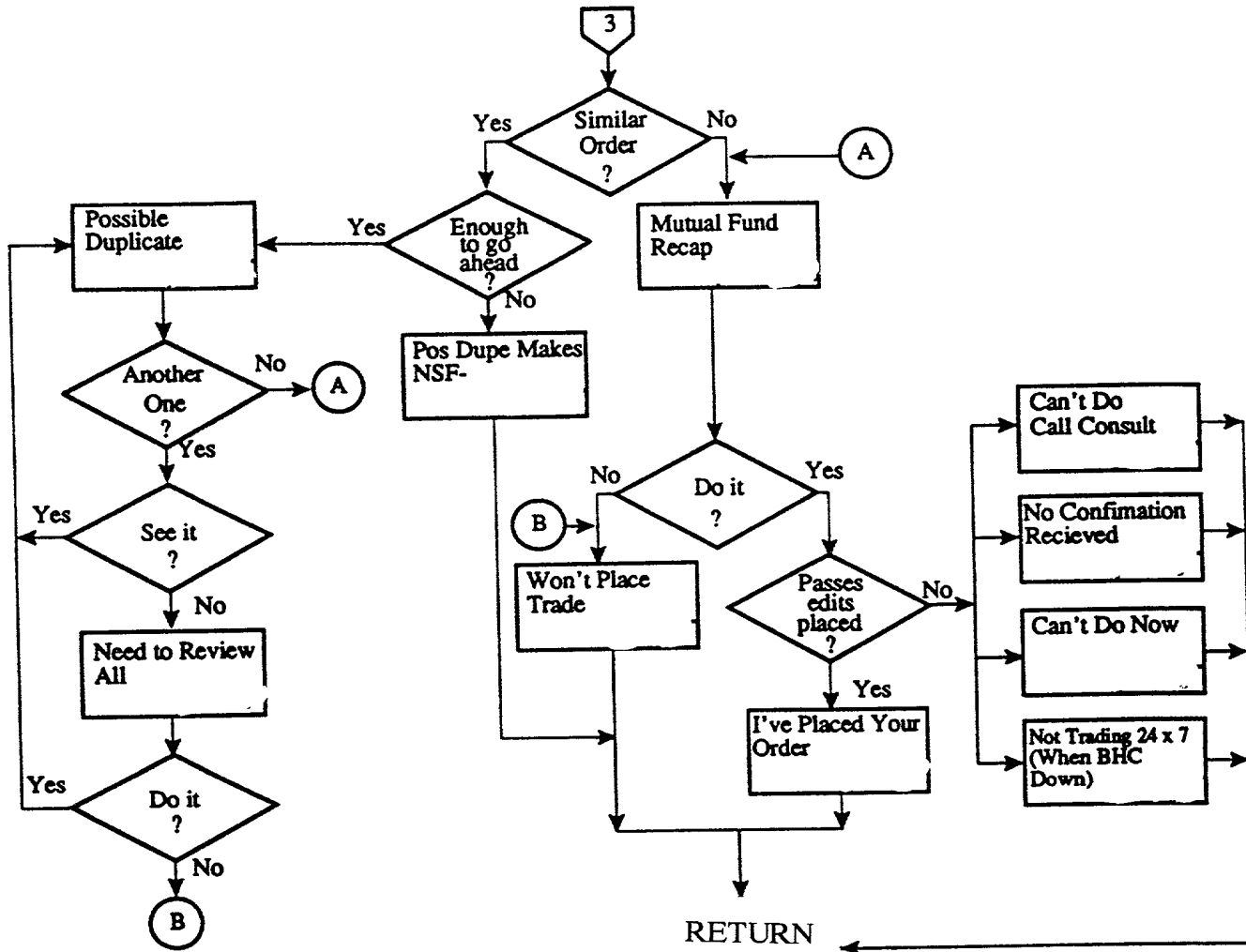
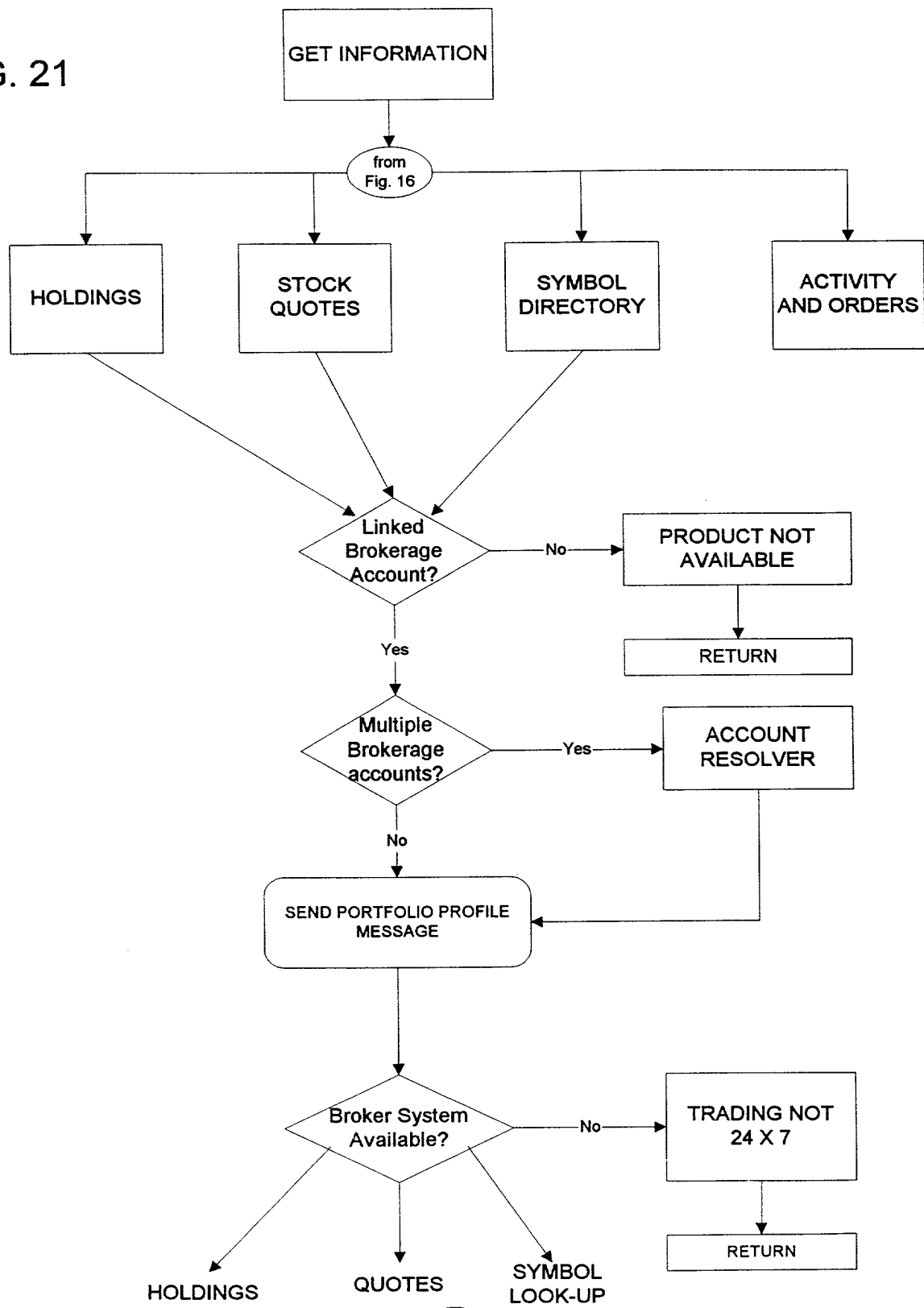


FIG. 21



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD AND SYSTEM FOR PROVIDING INTEGRATED BROKERAGE AND OTHER FINANCIAL SERVICES THROUGH CUSTOMER ACTIVATED TERMINALS
the specification of which

(check one)

☐ is attached hereto.

☐ was filed on June 7, 1995 as

Application Serial No. _____

and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

(Number) (Country) (Day/Month/Year Filed)

☐ Yes ☐ No

(Number) (Country) (Day/Month/Year Filed)

☐ Yes ☐ No

(Number) (Country) (Day/Month/Year Filed)

☐ Yes ☐ No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

English Language Declaration

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Richard Linn, Registration No. 25,144, Dale C. Hogue Registration No. 32,832, Ronald P. Kananen, Registration No. 24,104, Michael D. Bednarek, Registration No. 32,329, George T. Marcou, Registration No. 33,014, George C. Beck, Registration No. 38,072, Richard T. Peterson, Registration No. 35,320, and Jeffrey L. Thompson, Registration No. 37,025.

Send Correspondence to:

Dale C. Hogue
MARKS & MURASE L.L.P.
Suite 750
2001 L Street, N.W.
Washington, D.C. 20036

Direct telephone calls to:

Dale C. Hogue
(202) 955-4900

Full name of sole or first inventor PAUL SIDIKMAN	
Inventor's signature <i>Paul Sidikman</i>	Date
Residence Livingston, New Jersey	
Citizenship U.S.A.	
Post Office Address 30 Badger Drive, Livingston, New Jersey 07039	
Full name of second joint inventor, if any Lawrence D. Weiss	
Second Inventor's signature <i>W. Weiss</i>	Date
Residence Skaneateles, New York 13152	
Citizenship U.S.A.	
Post Office Address 2138 Lakeview Lane, Skaneateles, New York 13152	

(Supply similar information and signature for third and subsequent joint inventors.)